S. HRG. 114–267

WILDFIRE: STAKEHOLDER PERSPECTIVES ON BUDGETARY IMPACTS AND THREATS TO NATURAL RESOURCES ON FEDERAL, STATE, AND PRIVATE LANDS

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY UNITED STATES SENATE

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

NOVEMBER 5, 2015

Printed for the use of the
Committee on Agriculture, Nutrition, and Forestry

Available via the World Wide Web: http://www.fdsys.gov/

U.S. GOVERNMENT PUBLISHING OFFICE

98–996 PDF WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

PAT ROBERTS, Kansas, *Chairman*

THAD COCHRAN, Mississippi
MITCH MCCONNELL, Kentucky
JOHN BOOZMAN, Arkansas
JOHN HOEVEN, North Dakota
DAVID PERDUE, Georgia
JONI ERNST, Iowa
THOM TILLIS, North Carolina
BEN SASSE, Nebraska
CHARLES GRASSLEY, Iowa
JOHN THUNE, South Dakota

DEBBIE STABENOW, Michigan
PATRICK J. LEAHY, Vermont
SHERROD BROWN, Ohio
AMY KLOBUCHAR, Minnesota
MICHAEL BENNET, Colorado
KIRSTEN GILLIBRAND, New York
JOE DONNELLY, Indiana
HEIDI HEITKAMP, North Dakota
ROBERT P. CASEY, JR., Pennsylvania

JOEL T. LEFTWICH, MAJORITY STAFF DIRECTOR
ANNE C. HAZLETT, MAJORITY CHIEF COUNSEL
JESSICA L. WILLIAMS, CHIEF CLERK
JOSEPH A. SHULTZ, MINORITY STAFF DIRECTOR

CONTENTS

WILDFIRE: STAKEHOLDER PERSPECTIVES ON BUDGETARY IMPACTS AND THREATS TO NATURAL RESOURCES ON FEDERAL, STATE, AND PRIVATE LANDS

Thursday, November 5, 2015

UNITED STATES SENATE,
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, DC

The committee met, pursuant to notice, at 10:02 a.m., in room 328A, Russell Senate Office Building, Hon. Pat Roberts, Chairman of the committee, presiding.

Present or submitting a statement: Senators Roberts, Boozman, Perdue, Ernst, Tillis, Grassley, Thune, Stabenow, Brown, Klobuchar, Bennet, Gillibrand, Donnelly, and Casey.

STATEMENT OF HON. PAT ROBERTS, U.S. SENATOR FROM THE STATE OF KANSAS, CHAIRMAN, U.S. COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

Chairman ROBERTS. Good morning. I call this meeting of the Senate Committee on Agriculture, Nutrition, and Forestry to order.

Today, the committee turns its attention to a topic that is quite timely coming off the end of a disastrous wildfire season. It is my hope that this hearing adds to the public record about the need to address significant policy issues regarding catastrophic wildfire and forest management on federal, state, and private lands.

Let me emphasize that our committee has the oversight responsibility for the U.S. Forest Service, whose primary mission is to sustain the overall health, diversity, and productivity of our country's National Forests. Often thought of as a Western issue on public lands, this hearing serves as a reminder that the Agriculture Committee has a critical role in the larger wildfire debate.

National Forests, unlike National Parks and Refuges, are supposed to be administered and managed in a manner to provide multiple uses and benefits. The Forest Service readily admits that nearly half of the acres of the National Forest System are at high risk of devastating insect infestations, disease, and catastrophic wildfires. As a result of policy decisions from decades ago, we are now witnessing a significant decline in timber harvests and frivolous lawsuits halting active forest management and forest restoration projects, leaving our National Forests consisting of overstocked stands, simply as more fuel for more fires. Coupled with other threats, such as chronic drought and uncharacteristic insect out-

breaks, our National Forests are sitting as hazardous fuel stockpiles susceptible to damaging wildfires.

Today's wildfire season generates larger, hotter, and more dangerous wildfires, which unlike the occurrence of natural wildfires that have restorative abilities, these catastrophic emergencies devastate landscapes, ecosystems, communities, and people.

In response to this, the 2014 farm bill provided some valuable tools and authorities to the Forest Service. The Forest Service has made positive strides in implementing these provisions, but we have to see more progress and work on the ground.

This summer, the Administration warned Congress that wildfire suppression costs will consume the Forest Service's annual appropriated budget in the coming years. Wildfire preparedness and suppression costs now account for nearly half of the agency's annual discretionary budget. That is up from $1.6 billion in 1994 to $3.9 billion in 2014, last year.

Meanwhile, in order to address the rising agency costs, the Forest Service redirects other non-fire account program resources to cover the cost for wildfire suppression. This redirection of program funding, or "fire borrowing," is disruptive to the Forest Service and its ability to conduct other vital activities like preventive active forest management and hazardous fuels reductions.

The Agriculture Committee has a long history of working on and advancing legislation on forestry matters, most notably with the passage of the Healthy Forests Restoration Act of 2003. I would like to remind everyone that our Committee is a resource and we want to work with you as we try to tackle this wildfire issue. My hope is the message shared with us today reinforces and necessitates that the status quo is unacceptable and Congress must focus on this issue.

Before a shovel can break ground or even a chainsaw can enter a National Forest—obviously, not on its own—as a former Forest Service chief once said, quote, "there is a crazy quilt of laws" that the Forest Service must comply with which is time consuming and costly. The Forest Service must comply with well over 50 separate laws, like NEPA, the Clean Water Act, and the Endangered Species Act, just to name a few. The entire process, averaging at least three years for agency review and approval from the project's original inception—three years—not to mention the threat of frivolous lawsuits to stop this kind of restoration work, adds further time, uncertainty, costs, and delays.

These are fundamental and systemic problems contributing to the degradation of the National Forest System. It is time that Congress, the Administration, and stakeholders advocate for solutions that not only address funding fixes, but more importantly advocate for solutions that improve the management of our forests. Tough decisions will have to be made on a bipartisan basis for policies that promote greater streamlining and agency efficiencies so the Forest Service can actually conduct this kind of work.

Wildfire knows no boundaries. Forest Service efficiencies and bureaucratic red tape is a significant contributor prohibiting necessary and viable restoration work. If nothing changes, everything goes up in smoke.

I look forward to hearing from our witnesses.

With that, I recognize our distinguished Ranking Member, Senator Stabenow, for any remarks she might have.

STATEMENT OF HON. DEBBIE STABENOW, U.S. SENATOR FROM THE STATE OF MICHIGAN

Senator STABENOW. Well, thank you very much, Mr. Chairman. This is a very important hearing, obviously, and we appreciate all of our witnesses coming, giving their time and perspective and expertise.

I particularly want to give a special welcome to Chris Wood with Trout Unlimited, which was founded in my home State of Michigan in 1959, and we are so happy that you are here and look forward to your input on these critical issues.

This summer was yet, as we know, another record breaking wildfire season that resulted in more than nine million burned acres, destruction of thousands of homes and properties, and tragically, these fires took the lives of 13 wildland firefighters. We all know our thoughts and prayers here today are with the families of those brave men and women.

This devastation is a stark reminder of the challenges we face when dealing with the issue of wildfires. A warming climate, coupled with record droughts and increased residential development in fire-prone areas has made this problem worse and more complex for us to deal with.

While there is not a singular solution that will fix this problem, there are several measures that we as policymakers can enact now to help make a significant difference, and I hope we will talk about those today.

In July, this committee heard from USDA Under Secretary Robert Bonnie, who oversees the Forest Service, about the urgent need to fix the Forest Service's budget. Fixing the Forest Service budget is of paramount importance and needs to be a top priority for this Congress and for our committee and others.

The Forest Service is now routinely forced to transfer funds away from key projects, like forest restoration and timber sales, which help alleviate the threat of wildfires, and instead must use these funds to help pay for firefighting. This dynamic, known as "fire transfer" or "fire borrowing," is a huge problem, as the Chairman talked about. These transfers can cause what is essentially a "stop work order" on ongoing and long planned projects, which only place much of our forest at risk to everything from fires to invasive species when this work cannot be completed.

For example, a grant to help protect our Michigan forests against invasive species was pulled back by the Forest Service so they could spend that money on fighting fires. There are stories similar to this, I know, that colleagues have across the country. It is time to stop these transfers.

To address this, Senators Crapo and Wyden introduced bipartisan legislation, the Wildfire Disaster Funding Act, which would end the fire transfers by allowing the worst one or two percent of wildfires to be treated like natural disasters. Under this plan, the Forest Service would be able to fight the most severe fires more effectively by using disaster funds—certainly, these are disasters like any other disaster in our country—rather than having to transfer

funds from other accounts as they are now doing. I am pleased to be a cosponsor of this legislation. I appreciate their bipartisan approach and I hope that we will pass the bill.

Also, the 2014 farm bill, as the Chairman said, made significant reforms to the way we manage our National Forests. As we discuss building on these changes, something I am hopeful that we will talk about this morning, I suggest we also continue to prioritize the full implementation of the reforms enacted last year.

In fact, just last week, the State of Michigan and the Forest Service entered into a Good Neighbor Agreement. These agreements, which we expanded in the farm bill, are a great way that states and the federal government can partner to help restore our forests and sustain the more than 26,000 jobs that depend on healthy, vibrant forests in Michigan.

Mr. Chairman, I hope the committee is going to continue, and I know we will, in a bipartisan way to develop consensus around restoring and protecting our natural forests. I hope we will start by supporting the Wildfire Disaster Funding Act, which will free up needed resources to carry out policies that our committee as a whole has long championed.

I appreciate, again, your calling this meeting, and as always, look forward to working with everyone on the committee. Thank you.

Chairman ROBERTS. I appreciate the comments by my colleague and friend.

Welcome to our panel of witnesses before the Committee this morning. I am eager to hear testimony from all of you, as all members are, on this very important issue. I believe we have compiled a panel of witnesses that will be very constructive in the larger wildfire debate.

Our first witness is Mr. Dan Dessecker, who is the Director of Conservation Policy for the Ruffed Grouse Society and is responsible for the administration and development of the organization's conservation policy initiatives to promote forest health and wildlife habitat to sustain population for species of upland birds. In addition to his professional accolades, Dan serves on a number of wildlife and conservation boards, including the Department of Interior's newly established Sporting Conservation Council. Dan joins us from Rice Lake, Wisconsin. Welcome. I look forward to your testimony.

Our next witness is Mr. William "Bill" Dougan, who currently serves as the President of the National Federation of Federal Employees, a union representing federal employees including U.S. Forest Service firefighters. Prior to his current position, Mr. Dougan has served in a variety of capacities throughout his career with the Department of Interior, U.S. Forest Service, as a former Forester in the West, and even as a former Forest Service firefighter. Welcome. I look forward to your testimony, sir, and your insight.

Mr. Ken Stewart will be introduced by the distinguished Senator, Senator David Perdue.

Senator PERDUE. Thank you, Mr. Chairman.

I am pleased to introduce today Mr. Ken Stewart from Marietta, Georgia. Mr. Stewart currently serves as Chairman of the Board of Trustees for the American Forest Foundation. He has also returned

to my alma mater, Mr. Chairman, Georgia Tech, to work as Deputy Director of the newly formed Renewable Bioproducts Institute, after having retired as a Senior Advisor of Industry Strategy at Georgia Tech in 2010. Previously, he was appointed Commissioner of the Georgia Department of Economic Development in January 2007. He joined state government in September 2004 when he was appointed Director of the Georgia Forestry Commission.

Mr. Stewart's perspective on wildfire for the private landowner is especially important in our state, since Georgia has more privately owned commercially available timberland than any state in the country. Of Georgia's 24 million acres, 55 percent is owned by private individuals, only eight percent by public, federal, state, and county.

We should draw on Mr. Stewart's wealth of knowledge along with the experience of private and family forest landowners in the field. Their voices and concerns are critical as we discuss the importance of forest management and other forestry issues that impact them directly.

Ken, thanks for being here. We look forward to your testimony.

Chairman ROBERTS. Our next witness is Mr. Chris Treese and Senator Bennet is planning to introduce this witness and I recognize the distinguished Senator.

Senator BENNET. Thank you, Mr. Chairman, and thank you to you and Senator Stabenow for allowing me to introduce our next witness.

It really is my pleasure to welcome Chris Treese to today's hearing. He lives in beautiful Glenwood Springs, Colorado, where he serves as the Manager of External Affairs for the Colorado River Water Conservation District, more commonly known as the Colorado River District. He oversees legislative and regulatory issues that affect the Colorado River basin, and over the years, we have worked with Chris on a number of issues important to this committee.

You should know, Mr. Chairman, that he helped us to develop portions of the conservation title of the 2014 farm bill. He helped ensure that the bill focused on water quantity in the new Regional Conservation Partnership Program. He also helped us build consensus around the bill's forestry reforms. This includes the new treatment program for forests suffering from insect and disease epidemics, which is so important to our State of Colorado.

So, I would like to welcome Chris Treese to the committee and once again thank him for being here today.

Chairman ROBERTS. I thank the Senator.

Our next witness will be Chris Wood. Mr. Wood currently serves as the President and CEO of Trout Unlimited, which is a national conservation organization dedicated to conserve, protect, and restore North America's cold water fisheries and their watersheds. Prior to joining Trout Unlimited, Mr. Wood has also served in a variety of positions within the U.S. Forest Service and the Bureau of Land Management during the Clinton Administration.

Welcome to our panel. I look forward to your testimony. It should be noted that the Committee worked very hard to get witnesses addressing this issue by the name of Wood and Treese.

[Laughter.]

Chairman ROBERTS. Let us start off with our first panelist, please, and you may begin, sir.

STATEMENT OF DANIEL R. DESSECKER, DIRECTOR OF CONSERVATION POLICY, RUFFED GROUSE SOCIETY/AMERICAN WOODCOCK SOCIETY, RICE LAKE, WISCONSIN

Mr. DESSECKER. Chairman Roberts, Ranking Member Stabenow, and members of the Committee, thank you for the opportunity to be here with you this morning.

If we are to maintain the full array of forest wildlife on our National Forests, we have to maintain the full array of forest wildlife habitats, and, frankly, we are not doing that at this point.

National Forests throughout the Eastern United States have accomplished, on average, only 24 percent of their minimum goal for young forest habitats as identified in existing forest plans. We need to expand active management to move beyond that small number, and to do this, we need to provide the agency with adequate personnel and financial resources.

Unfortunately, as you pointed out, the U.S. Forest Service is indeed becoming the U.S. Fire Service. When 50 percent of the agency budget is eaten alive by addressing these conflagrations, that can make it very difficult for the agency to accomplish much of anything else, and a big chunk of that money is going to these mega-fires, which are increasingly common on the landscape, and unfortunately, are only likely to become even more so.

Every year, like wildfires in the West, we face tornadoes and hurricanes and we treat them and fund them as the natural disasters they are. It is time we consider doing the same thing for these mega-fires, these large, massive fires that simply consume the landscape.

Personnel and financial resources used to combat these mega-fires, these natural disasters, are unavailable to be used for wildlife conservation and other agency objectives. This leads to the loss of wildlife habitat diversity on the forests, and what we see from that is a loss of wildlife that require diverse habitats.

Ruffed grouse, a critter of immense importance to my members, is declining throughout forests across the country, particularly in the East. Elk and deer across the nation also are declining as these habitats become in short supply. Hunting is big business. Elk and deer hunters number about 11 million across the nation, and the expenditures that those folks provide local economies, rural economies, account for a major portion of the $34 billion spent by sport hunters every year. So, this is not small pocket change.

It is not just game animals. When you look at Region 9, which is the Northeastern quarter of the country, approximately—if you look at just species that require young forest habitats, those species are apt to be six times as likely to be declining as they are increasing. Region 8, the Southeastern portion of the country, same birds, same species, nine times as likely to be declining as they are increasing. We need to address that. These trends are real. They are disturbing from an ecological perspective, but they are reversible.

As you mentioned, this committee and others in Congress did a great job on the recent farm bill in providing Good Neighbor Authority, which will be helpful. It is just getting into gear, but we

think it has got tremendous potential to enhance what we can do on the landscapes by expanding state agency and other private partnerships.

Targeted categorical exclusion to address insect and disease issues, again, an excellent tool. We need to expand these tools. One way to do so would be to identify additional targeted categorical exclusions, particularly one geared toward providing wildlife habitat diversity on the forests.

We need to enhance budgetary certainty within the agency. We have to give them the resources to utilize to meet the challenges they face.

In summary, wildlife is pretty much the window through which many within our nation view our National Forests, and we need to enhance the ability of the agency to meet the objectives and the expectations of the public. Thank you.

[The prepared statement of Mr. Dessecker can be found on page 26 in the appendix.]

Chairman ROBERTS. Mr. Dougan.

STATEMENT OF WILLIAM R. DOUGAN, NATIONAL PRESIDENT, NATIONAL FEDERATION OF FEDERAL EMPLOYEES, WASHINGTON, DC

Mr. DOUGAN. Thank you, Chairman Roberts, Ranking Member Stabenow, and members of the committee, for inviting me to testify. Our union represents 110,000 federal workers across the country working in 35 different federal agencies and departments, including 20,000 in the Forest Service.

Prior to being elected to national office at NFFE, I spent 31 years working for the federal government. I worked primarily in the U.S. Forest Service and spent 22 years fighting wildfires.

I can tell you, firefighting is dangerous business. When you are on a fire, the only thing between you and trouble is your equipment and the brave men and women with you on the fire line. That is why it is so important that we arm firefighters with the training and resources they need to be safe and complete the mission.

The wildfire problem in the U.S. is growing. Seven of the worst fire seasons since 1960 have occurred in the last 15 years. This year, nearly 54,000 wildfires have burned 9.4 million acres, compared to the ten-year average of nearly 69,000 wildfires burning 6.5 million acres. We must recognize that this is the new normal and we must change the way we do business to account for it.

The USDA Inspector General issued a report in 2010 that predicted future shortages of qualified firefighters in the Forest Service. Too few were being trained to replace those retiring. That prediction is now coming to fruition and it is a major problem.

Wildland firefighting agencies have done tremendous work to improve interagency cooperation. The development of a consistent certification and training system, administered by the National Wildfire Coordinating Group, is an outstanding achievement. My union is proud to be a partner in the Wildland Firefighter Apprenticeship Program, which we hope will take consistency in training to the next level. Unfortunately, this program has been underutilized, in our view.

The attrition rate for wildland firefighters is alarmingly high. I am proud that my union worked with Representatives Gerry Connolly, Don Young, and Rob Bishop in the House and Senator Tester in the Senate on the Land Management Workforce Flexibility Act. I would like to thank Senator Johnson for his assistance in bringing the bill forward for a vote, where it was passed by unanimous consent and signed into law by the President in August.

For a wildland firefighter, experience is hard earned on the fire line. Prior to passage of this legislation, the firefighter career path was blocked by flawed and dysfunctional federal regulations which prevented long-term temporary employees from being able to advance their careers. Because of this barrier to career advancement, many skilled firefighters eventually left, taking their valuable skills with them. With this legislation signed into law, it will ensure that these long-term temporary employees are allowed to compete fairly for permanent positions when they become vacant, thereby retaining critical skills within the fire workforce.

I am disappointed to report that we are still awaiting OPM to issue implementation guidance to federal agencies. Unfortunately, while we wait, hiring for next year's firefighting workforce is already underway. Pending OPM guidance, agencies are not considering long-serving seasonal firefighters for career positions under merit promotion. If this does not change within the next few weeks, the knowledge loss we have been seeing for far too long already will continue another year.

Funding for wildfire suppression continues to be a problem. With the occurrence and severity of wildfires increasing, the portion of the budget that goes to fire suppression and preparedness has increased dramatically. In fiscal year 2015, the overall fire management budget for the Forest Service was $2.5 billion. Of that, $708 million was for fire suppression and $303 million was in a special account for firefighting. This is a 60 percent increase from a decade ago.

The expense of fighting wildfires often exceeds the funds appropriated for wildfire suppression. When this happens, agencies transfer funds from other programs into firefighting accounts to cover the shortfall. This so-called "fire borrowing" results in cancellations and delays in the agency's on-the-ground program of work.

In fiscal year 2015, the Forest Service was forced to transfer about $700 million from other programs in order to be able to continue to pay for suppression costs after initial funding was exhausted. Ironically, many of the canceled projects are those designed to reduce the frequency and severity of catastrophic wildfires. It is robbing Peter to pay Paul and it costs taxpayers more. We urge Congress to pass the Wildfire Disaster Funding Act to address this.

In addition to ensuring that there is sufficient funding available to pay for wildfire suppression costs, reduction of hazardous fuels in our forests and within communities existing in the wildland-urban interface must be part of a holistic strategy to reduce the risk of wildfires escaping initial attack and becoming catastrophic in nature. Simply increasing the suppression budget by itself will not be effective in reducing the impacts of wildfires.

It is time for Congress to take action to provide the resources and the flexibility necessary to protect the critical resources found in National Forests across the country and to protect communities across our nation from wildfire. These reforms cannot wait until next year. They need to be acted on immediately.

I thank the committee for holding this hearing and would be happy to answer any questions you might have.

[The prepared statement of Mr. Dougan can be found on page 28 in the appendix.]

Chairman ROBERTS. Mr. Dougan, thank you very much for your personal testimony on behalf of our firefighters. I know the Ranking Member and myself, all members of the committee, will join me in trying to light a fire under the Office of Personnel Management.

Senator STABENOW. Nice pun.

[Laughter.]

Chairman ROBERTS. Mr. Stewart.

STATEMENT OF KEN STEWART, CHAIR, BOARD OF TRUSTEES, AMERICAN FOREST FOUNDATION, AND DEPUTY DIRECTOR, RENEWABLE BIOPRODUCTS INSTITUTE, GEORGIA INSTITUTE OF TECHNOLOGY, MARIETTA, GEORGIA

Mr. STEWART. Mr. Chairman, Ranking Member Stabenow, and members of the committee, this is the perfect time for this hearing, of course. The fire season is coming largely to an end right now and I am so impressed with how well informed the committee is from the opening statements that were made about many of the issues that we are facing.

The American Forest Foundation represents the interest of 22 million family forest landowners across this country, and these are the private landowners that we are talking about here. The interest—your leadership on this issue is very important to us, and I would like to also submit for introduction into the record a report from the American Forest Foundation, "Western Water Threatened by Wildfire: It is Not Just a Public Lands Issue."

So, principally, I am going to talk about not the public side, but the private side today. Thirty percent of the lands in the 11 Western states are privately owned, and of that, 40 percent of the high fire threat lands are lands that are owned privately are in the critical fire hazard area. The interesting part of that is 64 million Westerners depend on that watershed for their drinking water.

The catastrophic wildfires that they are facing out West right now and have been facing burned so hot that it creates what is called a parking lot effect. It effectively bakes the soil, so when we have snow melt or rain, it runs off. It takes all the debris and contaminants and things with it. It does not soak up into the soils and trees as would normally happen and filter it. As a result, a lot of the municipalities in the West are spending millions of additional dollars just treating their water that they depend on, 64 million Westerners.

Well, the American Forest Foundation dug into this, mostly on the private side, and what we basically found, that there are some barriers to action. The people that own the land, yes, they are ready to go. Seventy-seven percent say, yes, there is a disconnect. We have got a couple things we need to deal with. One is the cost

of it and the other is that we if we treat our land and our neighbors do not, then what happens? What have we accomplished? They have got a good point. So, this is something that I think is appropriate for Congress to begin dealing with, for sure.

The metrics I mentioned earlier, that we have had 16 percent of the Forest Service budget was dedicated to fires a decade ago, 50 percent now, and projected to be two-thirds in 2025 if something is not done. The impact outside the West for this is what is important, and you would think that for Georgia and the Southern states, which also—and the Midwestern states also have fire problems, but state and private forestry programs are impacted and they have seen a 12 percent decrease in the last five years in their budget. Part of these are mitigation programs, too, which caused this not to happen. Some individual programs are down 20 percent.

Earlier, it was mentioned the borrowing program. That is a significant issue in terms of the whipsaw effect on programs, and some 40 percent of the Service Foresters have been laid off in the states.

So, this is not all about problems. Part of this is about solutions, and I am particularly going to focus on private lands here. But, first we recommend there are three solutions to consider.

One is we just must fix how wildfire fighting is funded. Obviously, Congressional action is needed and has been introduced to treat it like other federal emergency funding.

Secondly, we need funding to better enable the treatment of private family lands and do it on a landscape approach. This is simply words that say we need to be collaborative, we need to work with our partners, we need to work with the U.S. Forest Service, the National Resource Conservation Service, local and community agencies, as well, so that we have a coordinated landscape approach.

Third certainly is about markets. That is near and dear to my heart. It starts with markets. We have a way of spending some public money to develop and support those markets through loans and grant programs to help develop them.

So, Mr. Chairman, members of the committee, certainly the time to act is now. Thank you for your consideration, and I believe that what we are talking about here should have good bipartisan support.

[The prepared statement of Mr. Stewart can be found on page 34 in the appendix.]

[The information of Mr. Stewart can be found on page 113 in the appendix.]

Chairman ROBERTS. Mr. Stewart, thank you very much for your testimony and more especially pointing out that 30 percent of the forestland is held in private lands and your rather dramatic statement regarding the 64 million people who depend on their water supply with regards to the real problems that we face.

Mr. Treese.

STATEMENT OF CHRIS TREESE, MANAGER, EXTERNAL AFFAIRS, COLORADO RIVER WATER CONSERVATION DISTRICT, GLENWOOD SPRINGS, COLORADO, ON BEHALF OF THE NATIONAL WATER RESOURCES ASSOCIATION

Mr. TREESE. Good morning. Thank you, Chairman Roberts, Ranking Member Stabenow, thank you, Senator Bennet, for the generous introduction, members of the committee. I have the honor today of representing both my employer, the Colorado River Water Conservation District, and the National Water Resources Association and its members across 13 Western states.

As this committee knows, the founding purpose of the National Forest System was to secure favorable water flows. The currently degraded conditions of our National Forests adversely impacts water chemistry, runoff timing, and water yield. Large-scale high-intensity wildfires are becoming more frequent and significantly larger. Colorado alone from 2004 to 2007, an average of 40,000 acres of forestland was burned. That average jumped from 2007 to 2014 to 140,000 acres per year.

While wildfires can cause significant loss of water and hydropower infrastructure, wildfires' greatest impact to the water community often comes after the fire is out. Flooding, siltation, and debris flows represent the major and recurring threat post-fire. A 2003 study found post-fire runoff can increase tenfold and erosion rates increase up to 100 times over pre-fire conditions.

Remediation costs quickly run into the tens of millions. Additionally, drinking water treatment costs suffer similar or greater increases. Nearly all of these costs are borne by local utilities and water providers.

Federal actions must address both fire suppression and fire prevention. I applaud Senator Bennet's introduction of the bipartisan PREPARE Act addressing FEMA's limited funding of fire disasters and fire prevention. Already mentioned is the need to address "fire borrowing." The adequate resources for fire suppression cannot come at the expense of fire prevention.

Fire mitigation works. The record-setting Hayman wildfire in Colorado raced across Denver's foothills as an uncontrollable crown fire until it reached an area of the forest that had been previously thinned, when it dramatically and immediately dropped to a lesser intensity and manageable ground fire.

The 2014 farm bill's Regional Conservation Partnership Program created an innovative and competitive grant program to encourage and facilitate innovative watershed partnerships. The Resilient Federal Forests Act builds on the good work of this committee and the 2014 farm bill by incentivizing collaboration with local governments by expediting permitting for qualifying projects. Too often, environmental permitting comes as an impediment to critical, time sensitive, on-the-ground actions. The farm bill's authorization of categorical exclusion for insect infestations is very much appreciated and is being successfully employed in my district. These are good starts.

The deteriorating conditions of our forests did not come overnight and we do not contend that immediate action is possible—excuse me, immediate resolution is possible, but immediate action is imperative.

The Western water community is committed to working collaboratively over the long haul to improve our forests' health. I look forward to your questions.

[The prepared statement of Mr. Treese can be found on page 40 in the appendix.]

Chairman ROBERTS. Mr. Treese, thank you very much for your testimony, especially emphasizing the need for expediting policy as best we can do that.

Mr. Wood.

STATEMENT OF CHRIS WOOD, PRESIDENT AND CHIEF EXECUTIVE OFFICER, TROUT UNLIMITED, ARLINGTON, VIRGINIA

Mr. WOOD. Thank you, Chairman Roberts, and thank you, Ranking Member Stabenow and committee members. My name is Chris Wood. I am the President and CEO of Trout Unlimited.

Thank you for the opportunity to testify here today on wildfire management on public lands. The committee is right to focus on this issue. High levels of wildfire spending, including wholesale borrowing from other National Forest programs, are substantially undermining the ability of the Forest Service to manage our National Forests.

I offer this testimony today on behalf of Trout Unlimited and its 155,000 members, many of whom use and enjoy National Forests around the country. In fact, half of the nation's blue ribbon trout streams flow across the green lands of the National Forest Service.

As has been said, wildfires are becoming larger and more severe. Contributing factors include changing climate conditions, hotter, dryer summers, longer, more severe drought, increasing development in fire-prone areas, and the legacy of past timber management and fire suppression policies that have left many of our forested areas vulnerable.

The practice of budget raiding to fight fires significantly disrupts the mission of the Forest Service and the very health of the forests underneath its jurisdiction. Ironically, the more money that is transferred or reallocated to fight fire, the less money is available for restoration activities that would improve forest resiliency and minimize the severity and impact of fires.

We need to address two related problems: First, the mid-season unplanned fire borrowing, and second, the scope and scale of forest restoration work.

A solution to fire funding would allow access to disaster funding and address the increasing costs of suppression over time. The Wildfire Disaster Funding Act is the right solution to solve this problem.

In addition, we must accelerate the scope and the pace of restoration on our National Forestlands. As has been mentioned, the recent farm bill created opportunities, including a small targeted exemption from NEPA analysis for certain projects, permanent stewardship contracting authority, and the expansion of Good Neighbor Authority.

It is important to note, however, that cutting trees alone will not restore our forests. Restoration must be looked at—must be approached by looking at how best to recover ecological functions and processes that keep the land healthy. Closing or relocating roads,

fixing culverts, removing unneeded small dams, ensuring adequate flows of water, cleaning up abandoned mines, and thinning are all part of an integrated forest restoration strategy.

Fundamental to forest restoration is the fact that many of these forests that we are talking about are fire adapted and, in fact, need fire to remain healthy. Our general approach should be to allow fires to burn in remote areas so long as they do not pose risks to communities. Most hazardous fuels reduction and fire suppression should be focused first and foremost on urban-wildland interface areas where people live.

It is also important that we educate landowners about steps that they can take to make their own homes fire safe. Homeowners and local governments must bear more responsibility for the proliferation of homes in fire-prone areas and help to work to reduce the risk to homes and firefighters.

Thank you again for this opportunity to provide testimony on this important issue. Trout Unlimited supports S. 235, the Wildfire Disaster Funding Act of 2015, as a critical and necessary improvement to the existing fire budgeting process and urge the committee to advance the bill.

[The prepared statement of Mr. Wood can be found on page 49 in the appendix.]

Chairman ROBERTS. I thank the witness.

I ask unanimous consent to enter the following statements, letters of support, supplementary information into the hearing record on behalf of ten different organizations that complement the testimony of our panelists. Without objection, it is so ordered.

[The following information can be found on page 60 in the appendix.]

Chairman ROBERTS. I am going to ask members to limit their comments to four minutes in the hope that we can conclude this hearing, because we do have a vote at 11:00. We have seven members—we now have six members present.

[Laughter.]

Chairman ROBERTS. Did the distinguished Senator from Colorado leave? That means five. Let me ask our distinguished Ranking Member, five into 20 is four, is that not correct?

Senator STABENOW. That is correct.

Chairman ROBERTS. All right. I think we can do this. We ask the cooperation of the witnesses and we thank you again for your testimony.

Mr. Dessecker, can you further elaborate on the need for maintenance of early successional stage forest habitat, more especially with the conservation and environmental benefits that accrue from this kind of management to maintain early successional stage forest habitat. It seems to me that if we do this, we can avoid a lot of the problems later on. Please.

Mr. DESSECKER. Thank you, Mr. Chairman. Yes, early successional forests are basically young forests, characterized by thick, dense protective cover, dense growth, dense vegetation. They house a host of wildlife species that you will not find anywhere else, so we have to have those forests on the landscape. They host a variety of pollinators, a class of critters right now that we are very con-

cerned about. Pollinator numbers are declining across the country for various reasons.

So, without question, we have to employ additional active management to try and get a better balance between mature forests and old forests—excuse me, mature forests and young forests, recognizing that mature forests are equally as important as our young forests. But, when we see the latter declining at such precipitous rates, we have to increase our efforts to address that. A failure to do so will simply mean that these species that are of great ecological importance, in some regards economic importance, will regain their standing on the landscape. A failure to do so, frankly, in my—from my perspective, and I am a little biased as a wildlife biologist, but I think it would be irresponsible.

Chairman ROBERTS. Thank you very much.

I am going to yield to the distinguished Ranking Member.

Senator STABENOW. Thank you very much, Mr. Chairman, and thank you to all of you.

I have just a simple question first. I just want to make sure we are clear. I would like each of you just to indicate whether or not your organization supports the Wildfire Disaster Funding Act, if we could just start, Mr. Dessecker.

Mr. DESSECKER. Yes.

Senator STABENOW. Okay. Mr. Dougan.

Mr. DOUGAN. Yes.

Mr. STEWART. Absolutely.

Mr. TREESE. Yes, ma'am.

Mr. WOOD. Yes.

Senator STABENOW. I think we have unanimous agreement. That is great to know. That is a great place to start.

Let me then go to more specific kinds of questions, and let me start with Mr. Wood, Chris Wood. When you talk about the partnerships and through your work with Trout Unlimited as well as with the Forest Service in the past, could you talk a little bit more about additional examples and details to illustrate how damaging the fire transfers are to agencies and their partners when you are trying to do the work that you are doing.

Mr. WOOD. Yes, ma'am. What is happening is that organizations that work with the Forest Service are doing everything they can to spend as much money as they possibly can before June, or before the fire season starts. In places like Michigan, we have seen inventories, important road inventories, that are not being done to help identify places where culverts in the landscape need to be replaced because they are bleeding sediment into rivers. We have seen lots of endangered species work that would be done that cannot be done. Of course, the more we do to offset the need to list species, the less social and economic disruption we have.

Essentially, it was said earlier, we are basically robbing Peter to pay Paul. We are taking money away from programs that help to not only manage healthy landscapes, but create economic opportunity and jobs in order to fight fire.

Senator STABENOW. Thank you very much.

Mr. Dessecker, could you talk a little bit more, in your work with the Forest Service National Advisory

Committee on the 2012 Forest Planning Rule, do you see new opportunities to improve the way the agency develops management plans that will reduce fire risk and restore wildlife habitat?

Mr. DESSECKER. I think the primary impetus with regard to the implementation FACA Committee that you are referring to, we are very interested in the idea of collaboratives, bringing people to work together during project planning, during forest plan planning, so that there is a greater buy-in. We feel quite strongly, and I want to be careful because I do not want to speak for the members of the committee, but I think it is fair to suggest that there is broad consensus that if we can reduce the rancor, we will have more funds to spend on conservation.

Senator STABENOW. Thank you very much.

Mr. Dougan, I wonder if you might speak a little bit more about your observations over the years. You started, you said, in 1979 with the Forest Service, and what implications have the changes that you have seen had for the wildland firefighters who are out on the front lines?

Mr. DOUGAN. I think it is pretty clear that, when you look at wildfires over the last ten to 15 years, we are seeing an increase in the severity of the fires. These fires are burning hotter. They are covering a lot more ground in shorter periods of time, which creates problems from a safety standpoint for these crews that are out there on the landscape trying to dig fire line to stop these fires. We are seeing a lot more crown fires, where the fire gets up into the tops of the trees and it can spread very rapidly. These fires, if they are large enough, they can create their own weather system.

Much of the large amount of money that is being spent on fires is with one percent of the fires that escape initial containment and then the landscape characteristics are such and the forest characteristics are such that they become catastrophic very quickly, placing not only the firefighters, but the communities in and around these fires in danger.

Senator STABENOW. Thank you, Mr. Chairman. I just comment, as we close—I will not have a chance to ask Mr. Treese, but I really appreciate you mentioning the Regional Conservation Partnership Program. I look forward to talking with you more about that. I think that was one of the real successes of the last farm bill and we are hopeful it will continue to be a positive tool. Thank you.

Chairman ROBERTS. Senator Tillis.

Senator TILLIS. Thank you, Mr. Chair.

Mr. Dougan, I have a question. We understand the discussion going around the "fire borrowing," but I have a question maybe related to some of the underlying cost. What thoughts do you have on things that we can do to reduce the cost of suppressing large fires?

Mr. DOUGAN. I think we need to invest more in hazardous fuel reduction, in pre-suppression activities. It is the same approach as going to a dentist and getting your teeth cleaned. It is insurance, trying to help not get a cavity. The same principle applies in the forests. We have to actively manage, these forests.

If you look at the predominance of forests out in the Western United States, these are fire-adapted forests. These forests depend on fire. The problem that we have out there today is our own mak-

ing. Over the last 100 years, we have been very aggressive in putting out every fire that starts and not allowing fire to have a natural role in the landscape and in the ecosystems, and because of that, we have had these large build-ups of both ground fuels and standing fuel. So, if we get a fire going now, it creates a problem. So, we have to be actively managing, actively looking at reducing hazards.

Senator TILLIS. I agree with the ounce of prevention argument. The question about once it occurs, are we as efficient as we can possibly be in ultimately trying to address these wildfires once they occur?

Mr. DOUGAN. Well, I think there is always room for improvement. When I look back on my career and I look back on the history of firefighting in this country, other than some of the new technology that we have in terms of having planes that are dropping fire retardant—we did not have that at the beginning of the 1900s—but in terms of the actual work and the tools that people on the ground are using to dig fire line, that really has not changed very much over the last 100-plus years.

So, I think it is worthwhile thinking about and asking the fire agencies, such as the Forest Service and BLM, whether there is any interest or whether they think there would be any good outcomes in investing some in research and looking at new technology to help these folks out on the line.

Senator TILLIS. What about the structural relationships with states? I am from North Carolina. We have had a lot of firefighters go out West from time to time to assist. How would you assess that cooperative relationship when you need additional resources to go out there?

Mr. DOUGAN. It is absolutely critical, and, this year at its peak of this fire season, we had over 30,000 people out on fire lines nationwide fighting fire. So, without having the ability to move crews, whether they are contractor crews, whether they are federal employees, without the ability to move those folks where we need them, where the most critical fires are, we would have a much worse situation. So, I really appreciate the fact that your state and others have pitched in over the years and made people available.

Senator TILLIS. Yes. I want to keep to my time, because the Chair scares me——

[Laughter.]

Senator TILLIS. —but I do appreciate all the witnesses. I appreciate all the witnesses being here and would appreciate any feedback after the hearing in my office. Thank you.

Thank you, Mr. Chair.

Chairman ROBERTS. Senator Klobuchar.

Senator KLOBUCHAR. Thank you very much, Mr. Chairman.

In Minnesota, forests are a big part of the culture of our state, but also of our economy, employing 40,000 people in the forest industry, $9.7 billion. That is what my Grandpa did after the mine closed down, so it is near and dear to my heart.

I, like so many people have talked about today, am most concerned about the fact that the transfers of money, which have to obviously take place for emergency, for fighting fires, is taking away from what we can do to prevent these fires from happening

in the first place. Budget transfers prevented the Chippewa National Forest from conducting fuels reduction burns on 165 acres this year. This work not only protects the forests from wildfires, but also the surrounding communities.

Mr. Treese, you talked a little bit about how communities and water infrastructure is impacted and often destroyed by wildfires. How have water resource agencies had to adapt their safety procedures to accommodate wildfire risks?

Mr. TREESE. Thank you, Senator. They have done their best, but it is an enormous investment. Some of the larger communities have been able to create redundancies, interconnects with cooperating neighboring agencies, neighboring utilities, and created or established multiple watershed sources for their water. For the most part, however, that is not possible in rural Colorado, in Western Colorado. In my district, mostly small communities, that is simply cost prohibitive——

Senator KLOBUCHAR. Yes.

Mr. TREESE. —and you simply run the risk.

Senator KLOBUCHAR. Right. Exactly.

Mr. Stewart, what role can private forest landowners play in restoring forest health? You mentioned that in your testimony.

Mr. STEWART. Yes, and I speak mostly to the private landowner, but, in fact, it is a cooperative effort. I also talked about neighbors, and public lands and private lands are neighbors throughout the country and they both need to be actively managed. The lack of management combined with the climate conditions that we find and the drought particularly in the West are all contributing factors to where we find ourselves.

But, interestingly, this ultimately gets back to the budget, and if we spend money on the budget, maintain the programs which continue to improve the land and invest in the state and local programs that the Forest Service has, it improves it over time and it makes the——

Senator KLOBUCHAR. Exactly.

Mr. STEWART. —it mitigates the risk. So, it is something we have to continue to invest in.

Senator KLOBUCHAR. Yes. Thank you.

Mr. Dessecker, or maybe Mr. Wood over there, again, back to my original point here, what do you think we should be doing—beyond putting money into fighting fires, what should we be doing to change some of our policies, craft solutions to address forest health, and along those lines, what concrete steps should we be taking to assist the Forest Service in meeting their forest plan, because I know in Minnesota, they have not reached even their goals of how many trees should be cut and it is obviously creating a further problem because the fires, then, can go more rampant. Mr. Dessecker.

Mr. DESSECKER. Very simply, secure the budgetary authority of the agency to fund these things as the way they are, natural disasters, as opposed to taking the money from the budget, and allow them the personnel resources to get the work done on the ground that has been identified through the planning process.

Senator KLOBUCHAR. Thank you.

Mr.—go ahead, if you want. Mr. Wood.

Mr. WOOD. No, I think it has been said before. I think the ounce of prevention is worth a pound of cure message is one that is apt here. We should be taking steps to make sure our communities are safe, first and foremost, by doing hazardous fuels treatments around those communities, making sure that we are protecting homes by taking fire-wise measures and operating at larger landscapes in terms of our restoration. But the first thing we have to do is fix the "fire borrowing" problem.

Senator KLOBUCHAR. Exactly. Thank you, Mr. Dougan, for your work, as well. I am out of time. I will give you a question on the record. I am sure you will look forward to that. Thanks.

[Laughter.]

Chairman ROBERTS. I would like to remind the new members, or not the new members, the members who have come to the committee at this particular time, that we are on a four-minute time schedule trying to make the vote.

Senator Ernst.

Senator ERNST. Thank you, Mr. Chair, very much.

Thank you all for joining us today. I am sorry to join the discussion so late, but if you would, have any of your agencies or organizations utilized or witnessed utilization of the National Guard forces in any of these forest fire or fire activities, and if you could, just please share with us that experience.

Mr. DOUGAN. Yes. This season was the first time since, I believe, 2006, when the National Guard and military forces were called in to supplement the firefighting workforce. The Forest Service and other agencies responsible for managing those incidents utilized many hundreds, if not thousands, of military personnel.

Senator ERNST. Anybody else have experience in utilizing any of the National Guard?

[No response.]

Senator ERNST. Well, we do have some wonderful Army Guard and Air Guard personnel out there, and I just want to reinforce that we should not overlook the capabilities that are available with those types of response units.

So, that is all I have. Thank you, Mr. Chair.

Chairman ROBERTS. I thank the Senator.

Senator Bennet.

Senator BENNET. Thank you, Mr. Chairman, and I want to say to you on behalf of the people I represent in Colorado how much we appreciate your holding this hearing. I think the testimony has just been excellent, and what comes through to me is that there is a compelling consensus that what we are doing now does not work and that we have got to change it, and it is long overdue. Your bringing the attention to this issue, I think, comes at a critical moment when we can get it done.

I mean, look, there are two big issues here, I think, and the first is, in the name of fiscal responsibility, we are managing our forests in the most fiscally irresponsible manner we can manage them, which is to say that we are taking the money that could be spent on mitigation and on restoration and we are using it to suppress fires. Then there is not money left to mitigate or restore, which is why we talk about it as penny wise and pound foolish. That is what it is. It is ridiculous and we have got to stop it. Nobody at

the local level would ever accept this way of managing their resources and we should not accept it, either.

The second part, I know it is fashionable now, we are having debate in this Congress about what the role of the federal government should be. Anybody who is downstream of these headwaters in Colorado needs to care about the condition of the forests in Colorado. We are all in this together. We are one nation, and this—I cannot think of an issue where it is more true than here.

So, what we are doing right now, I think, fails the test in terms of fiscal responsibility and fails the test in terms of anybody's perspective of what federalism means, and I hope we are going to be able to get this legislation passed.

I thank you all again for your excellent testimony.

Mr. Treese, it has just been great to work with you over the past number of years, and the farm bill process was difficult, but it resulted in a collaborative product that everyone could support and we are seeing the benefits. Two projects, as you mentioned in your testimony, are underway in Colorado to treat 3,000 acres of forests affected by insect and disease epidemics. Now, in the short term, as I mentioned, it is clear that we have to fix this "fire borrowing" problem, but I wonder if you could explain to us from your perspective as a water provider why it is so critical to address that and how these projects are working in Colorado.

Mr. TREESE. Thank you, Senator. I think the projects are, in fact, working, but they are working on a limited basis. They are small acreages, but they are critically important. It is the prevention. It is, as the commercial says, pay me now or pay me later. This is an opportunity to treat the forests both through the categorical exclusion and, in fact, the program you mentioned also uses the extension of the Good Neighbor Policy to work on both federal and private lands cooperatively and conjoinedly in neighboring forests to address a larger watershed that is used by both the City of Grand Junction and the larger Ute Water District around that city, about roughly 100,000 people.

Senator BENNET. Maybe, actually, that is the third point of consensus that we have heard here, which is the significance of collaboration in order to get this done, because fire does not know any boundaries, jurisdictional or otherwise.

Mr. Wood, I am running out of time here. It is my own fault. I blabbed, which I do not usually do. But, it is not even the subject of this hearing, but I want to thank you for leading the effort on Good Samaritan legislation to address the acid mine drainage that is polluting streams across the West. This is something that we really need to address. I know Trout Unlimited has been very involved, and I wonder if you could just spend less than a minute talking about where you are in the work and where you think you are headed. I have 21 seconds.

Mr. WOOD. Okay. I will be brief. Thank you for those kind words. There are essentially two problems with abandoned mines. There are literally thousands of them around the West affecting the water quality out there. One is that we need relief from liability that is implicit in CERCLA and the Clean Water Act, and we are making progress there. Then, number two, we need more funding to clean those mines up.

Senator BENNET. Mr. Chairman, thank you again.

Chairman ROBERTS. I thank the Senator from Colorado. We can see you from Mount Sunflower on the western end of the plains. If the smoke is billowing, we know we have a problem.

[Laughter.]

Chairman ROBERTS. Coop, you are up next.

Senator THUNE. Well, thank you, Mr. Chairman and Ranking Member Stabenow, for holding this hearing. It is good to hear from stakeholders on this issue. This is a really important issue which deals with budgetary impacts and threats to our natural resources on federal, state, and private lands. I am, Mr. Chairman, pleased to have these very distinguished leaders in our conservation, forestry, and wildlife communities who all recognize the urgent need for changes in our current forest management policies.

A lot of the hearing today, I think, is focused on firefighting, borrowing, with the cost of fighting fires rising to $3 billion this year. But, I would—we have got to find a more effective means of paying for fighting those fires and eliminate the borrowing from forest management funds. But I also believe, Mr. Chairman, that it is imperative that we couple funding firefighting with improved forest management. Failure to improve forest management will result in a continuation of dangerous increases in forest fires and damages to private property and to the environment, and there are three things that I think can be done to improve forest management dramatically.

The three changes that I would suggest, and I want to get our panel's reaction to this. But first would be to expand the use of categorical exclusions under NEPA. Second, to reduce litigated risk. Third, implementation of large landscape management plans, one of which is on the ground in the Black Hills National Forest in South Dakota and has proven to be very effective in battling the pine beetle infestation that we have had there.

So, Mr. Chairman, I just think we have to—once again, we have a problem some believe can be solved by throwing more money at it, but I believe that if we can take a measured, common sense approach to managing our forests and to clearing the pathway for federal agencies to manage them effectively, we can make much better use of and even reduce the funding that is dedicated to fighting fires.

So, I would like to get the panel's reaction, if I might, to just their thoughts about the three things that I have suggested and ask the question, do you believe that these following three items, if implemented, would benefit forest management, again, categorical exclusion expansion under NEPA, reducing litigated risk when collaborative forest management projects are implemented, and allowing the use of arbitration as an alternative dispute resolution mechanism, and then, finally, increased use of large landscape management plans. Mr. Stewart, do you want to lead off.

Mr. STEWART. Yes. I will speak to the landscape approach, which I see as a partnership, a collaborative approach, both public and private, and I think that is probably where our biggest strength is and the biggest opportunity that we have is in focusing on a common objective based on a large scale landscape. I think that is a big part of the solution.

Senator THUNE. Others on any of those.

Mr. WOOD. On the categorical exclusion issue, I think in areas where you have broad agreement among multiple interests who have come together in some form of collaborative, I think relaxing some of the process requirements is probably a good idea. I would be nervous about doing that writ large across the landscape, because what you will do is you will end up creating antagonism and people will feel cut out of the process and they will try to gum up the works. So, that is my only comment.

Senator THUNE. Mr. Dougan.

Mr. DOUGAN. Yes. I would also like to comment on the landscape idea. I know out in Eastern Oregon, my labor organization is working as part of a collaborative effort on stewardship with communities in Eastern Oregon, with other stakeholders, timber companies, environmental groups, bringing people together to talk about landscapes and what needs to be done and trying to iron out and reach agreement on as many issues in terms of how we should manage that land and what we should manage that land for in terms of timber and other values, and we are having some success doing that.

So, I think those kinds of efforts, where you bring the stakeholders together and then hold everybody accountable for coming up with the solutions, I think that is a good approach to supplement this idea of landscape, because as has been pointed out, fire knows no geopolitical boundaries and we cannot just treat federal lands and let state and private lands go untreated because that is not going to solve the problem.

Senator THUNE. Anybody else?

Mr. DESSECKER. Yes to all three.

Senator THUNE. Good. That is the answer I was looking for.

Thank you, Mr. Chairman.

Chairman ROBERTS. I thank the Senator from South Dakota. He has really focused on the one question I was going to ask with regards to the landscape issue and I appreciate that very much and I thank the panelists for answering. Senator Boozman, let me remind all members that the vote has started. We have informed the cloakroom that we will be arriving soon.

Mr. Boozman.

Senator BOOZMAN. Well, thank you, Mr. Chairman.

I just want to take a second to highlight the efforts of my home state colleague, Congressman Bruce Westerman. Congressman Westerman is a professional engineer and the only Forester in Congress. He worked in forestry for almost two decades, earned a Master of Forestry degree from Yale University in 2001. He is a diverse guy. He played football at the University of Arkansas, also. His legislation, the Resilient Federal Forest Act, treats both the sickness of overgrown mismanaged forests and the symptoms, which include wildfire, disease, and insect infestations. I strongly support the bill.

I would like to ask consent that we include a bipartisan op-ed that Congressman Westerman and his Democratic colleague, Congressman Kurt Schrader, have written titled, "Resilient Federal Forest Act Treats Symptoms of Diseases" into the record.

[The information of Hon. John Boozman can be found on page 112 in the appendix.]

Chairman ROBERTS. Without objection.

Senator BOOZMAN. Very quickly, Mr. Stewart, while these issues are largely high profile in the West, we have serious impacts in the South, and I am really pleased that you are a witness and from that region, which includes a significant blend of federal forests, private, family land, and ownerships of an assortment of things. While I know your report focused largely on the West, how are the issues in the South similar or different when it comes to wildfire?

Mr. STEWART. Well, the wildfires know, again, we talked about, no geopolitical boundaries, and certainly we have lots of wildfires, generally not as large, but they are all catastrophic when we have them. We have, again, the impact on the budget affects those states not in the West, just like it affects the states in the West——

Senator BOOZMAN. Right.

Mr. STEWART. —and, so, if we look at the state and private programs and the mitigation efforts and the employment of the Service Foresters and others that are doing work for the private landowners, they are certainly impacted outside the West as a result of these fires and the way the budget is handled. So, it is a very significant impact throughout the country.

Senator BOOZMAN. So, what more can we do on public lands, since much of the inaction stems from lack of public land management? Does AFF have a position on the federal forest reform bill that is before this committee?

Mr. STEWART. Well, our focus principally is on private lands, so that is where our focus is. But, certainly, the more management we have on both public and private lands, the more successful we are going to be in mitigating not only the risk, but the exposure that we have for—not just from wildfire, but also, as we reported in our report we submitted to the committee, related to water, as well. That is not exclusive to the West.

Senator BOOZMAN. Sure. Have you taken a position on the bill?

Mr. STEWART. Not that I know of, no.

Senator BOOZMAN. Okay. Very good. What more can we do to stimulate markets for forest products to help address these wildfire and other issues?

Mr. STEWART. Well, I am kind of a market person, so I think it is not a field of dreams approach, necessarily, that we take here. But something has to get this virtuous cycle started, and I think the grant programs that can begin to develop markets for forests that need to be restored, public or private, is most appropriate, as well as programs that identify those markets. Then the last component of it relates to research. I know in the Renewable Bioproducts Institute where I work at Georgia Tech, a lot of the focus is on the bio-based materials, and cellulose is going to be the backbone, I believe, of the future for our green chemistry and materials industry of the future.

Senator BOOZMAN. Good. Thank you, Mr. Chairman. Thank you all for being here.

Chairman ROBERTS. Let me advise members we have eight minutes left on the vote. Senator Casey, if you could wrap up for us.

Senator CASEY. Mr. Chairman, thank you very much. I will keep within my time.

I want to thank our witnesses for being here today. We are grateful for your testimony.

I wanted to maybe direct my questions to our first two witnesses, and I say this as representing a state where we have got something on the order of 57 percent of our state is forested. We have got about 80,000 people that work in the forestry business. So, this is a major issue for Pennsylvania.

Mr. Dessecker, you spoke of budget certainty, or a lack of budget certainty, and you also talked about the specific issue of funding for wildfire suppression affecting the ability of the Forest Service to meet wildlife management and invasive species management. Can you talk about those two issues? I know they are related, but I think it bears repeating how devastating, at least in my judgment, sequestration has been, among other problems you have had to face with regard to—or that the country has had to face with regard to budget uncertainty.

Mr. DESSECKER. With regard to uncertainty, it is rampant within the agency at this point because although they have a budget, they simply do not know what proportion of that budget is going to be pulled mid-year or late-year, so they do not know exactly what portion they can spend, and they do get directives to watch what they are doing, and they have to determine how the fire season is going before they can really implement projects that they have already planned.

Senator CASEY. Well, we appreciate you raising that, and I know we are very limited on time.

Mr. Dougan, I wanted to ask you, I noted in your testimony about 22 years of fighting fires, a good part of your life, and the focus that you brought on the issue of well-trained firefighting staff. Can you walk us through that basic concern that you have?

Mr. DOUGAN. Yes. There is a system in place, an interagency system in place that was put together to certify wildland firefighters, and they are required to take certain training, certain on-the-job training, and they are evaluated on the job, and then if they are found proficient, then they are certified to do certain jobs in the fire organization.

Again, part of the problem is we have got a lot of—within the federal government, we have got a lot of people that we invested a lot of money in and have a lot of years that are at that age that they are making plans to retire and walk out the door, and with them is going to go that knowledge and those skills. The federal government overall has not done, in my opinion, a real good job of succession planning, not just in the fire organization, but certainly across many other agencies. So, that is one of the things we are facing.

The other problems that we have, again, are budget related. A lot of agencies, if they have concerns over their budget, typically, the first thing that they set aside to try to save money is training and travel, which is sort of a self-fulfilling prophecy for not being able to do a good job of succession planning within the future leadership of the fire management workforce.

Senator CASEY. Mr. Chairman, in light of the time, I will submit questions for the record.

Chairman ROBERTS. I appreciate that.

This will conclude our hearing today. I want to thank each of our witnesses for sharing your views on wildfire. The testimonies provided today are valuable for the Committee to hear firsthand, and we will take action.

To my fellow members, we would ask that any additional questions you may have for the record be submitted to the committee clerk five business days from today, or by 5:00 p.m. next Thursday, November 12.

The committee is adjourned.

[Whereupon, at 11:13 a.m., the committee was adjourned.]

A P P E N D I X

NOVEMBER 5, 2015

TESTIMONY BEFORE THE U.S. SENATE

COMMITTEE ON AGRICULTURE, NUTRITION & FORESTRY

Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands

5 November 2015

Daniel R. Dessecker

Director of Conservation Policy

Ruffed Grouse Society/American Woodcock Society

Mr. Chairman and Committee Members:

Thank you for the opportunity to address the growing challenges posed by wildfires and the associated suppression efforts to wildlife conservation on our nation's federal public lands and nearby state and private lands.

The current dedication of approximately 50% of the United States Forest Service (USFS) budget to combat these natural disasters is significantly affecting the ability of the agency to meet wildlife-related and other forest plan objectives and public expectations. Common-sense solutions, such as targeted categorical exclusions, to redundant project planning requirements are essential. Likewise, fiscally responsible funding protocols to ease the financial burden on the USFS and other federal land management agencies from wildfire suppression costs would enhance the ability of these agencies to succeed in their efforts to conserve our nation's wildlife and secure our nation's hunting heritage.

We must work to increase the diversity of forest wildlife habitats on our National Forests across the nation. National Forests in the eastern United States have consistently failed to meet minimum goals for young forest and other early successional habitats as outlined in existing forest plans. National Forests throughout the east have accomplished on average only 24% of the minimum forest plan goals for young forest habitats. This failure has resulted in substantial declines in populations of game and nongame wildlife that depend upon these important habitats. This failure is in part a result of wildfire-related demands on USFS financial and personnel resources. These demands can limit the ability of the agency to implement the sustainable timber harvests and other forest habitat management practices that are required to ensure that young forest habitats and the wildlife they support remain viable components of our forest landscapes.

The ruffed grouse is the most popular upland game bird in the eastern United States. Over half a million sportsmen and women pursue ruffed grouse each year and associated expenditures are vitally important to many rural communities, particularly in the Great Lakes states and the Northeast. Unfortunately, declines in young forest habitats due to a lack of active management on National Forests and surrounding landscapes throughout much of the east have led to concomitant declines in ruffed grouse populations. Indeed, the ruffed grouse has been all but extirpated from the Chattahoochee National Forest in Georgia, the Hoosier National Forest in Indiana, the Sumter National Forest in South Carolina and the Wayne National Forest in Ohio.

Deer hunting is both a foundation of our nation's hunting heritage and a huge economic engine. According to the United States Fish & Wildlife Service (2011), approximately 11 million sportsmen and women hunt deer each year and this activity accounts for a substantial portion of the $34 billion contributed annually by hunters to the United States economy. The lack of young forest habitats on the George Washington – Jefferson National Forest in Virginia has dramatically reduced white-tailed deer hunting on the Forest. Since 1994, hunter participation and harvest on public land west of the Blue Ridge Mountains in Virginia (primarily National Forest) has declined by 30%, and 57%, respectively. According to the Virginia Department of Game and Inland Fisheries, *"...the National Forest deer habitat can be considered suboptimal or marginal from a deer management perspective."* In an assessment of white-tailed deer management in Wisconsin, Kroll et al. (2012) state: *"...National Forest management policy has had a dramatic impact on deer herd productivity..."* Unfortunately, that dramatic impact has been distinctly negative.

Many nongame species that require young forest habitats are experiencing population declines as these habitats decline on National Forests and surrounding landscapes throughout the eastern United States. In 2007, the American Bird Conservancy classified young deciduous forests in the eastern United States as one of the nation's 20 most threatened bird habitats. Breeding Bird Survey data from the United States Geological Survey show that across the eastern United States, 59% of the songbird species that use these young forest habitats for breeding are declining, while only 11% are increasing. Conversely, only 29% of the songbird species that breed in mature forest habitats are declining, while 31% are increasing.

Forest stewardship projects and other collaborative efforts between USFS and public and private partners throughout the West are essential for the development of young forest habitats where elk, deer, moose and other game and nongame wildlife prosper. Delays and cancellations of these projects due to wildfire-suppression related financial and personnel limitations can cause a perverse outcome – they only increase the susceptibility of local landscapes to the very natural disasters these projects are intended to protect against.

Relieving "analysis paralysis" thru targeted categorical exclusions and providing some degree of budgetary certainty to federal land managers would greatly aid in addressing the many challenges posed by seemingly ever-increasing wildfires.

Because we have and continue to fail to lock the barn door, we are forced to address the consequences as the horses run amuck.

STATEMENT OF

WILLIAM R. DOUGAN
NATIONAL PRESIDENT
NATIONAL FEDERATION OF FEDERAL EMPLOYEES

BEFORE

**U.S. SENATE COMMITTEE ON
AGRICULTURE, NUTRITION & FORESTRY**

REGARDING

WILDFIRE: STAKEHOLDER PERSPECTIVES ON BUDGETARY IMPACTS AND THREATS TO NATURAL RESOURCES ON FEDERAL, STATE AND PRIVATE LANDS

November 5, 2015

Thank you, Chairman Roberts and members of the committee for inviting me to testify today. I am here on behalf of the National Federation of Federal Employees (NFFE) and the 110,000 federal workers we represent at 40 different agencies throughout the federal government, including approximately 20,000 in the U.S. Forest Service.

I began my federal career in 1976 as a temporary employee with the National Park Service. I then worked three years as a temporary employee for the Forest Service as a firefighter and tree planter before becoming a permanent federal employee in 1979. I worked as a forester on the Siuslaw and Rogue River National Forests in Oregon and spent the last 16 years of my 31-year federal career at the Tongass National Forest in Sitka, Alaska. For 22 of my 31 years in federal service I fought wildfires, serving in a variety of fire positions, including: firefighter, crew boss, incident commander, and other fire positions. While working in Alaska, I served as a crew boss fighting wildfires in-state as well as taking Alaskan crews down to the lower 48 states.

I know what it is like to be in the thick of a raging wildfire. I know what it is like to be out with your crew trying to tame a blaze and knowing that a small shift in the wind pattern could put your life and the lives of your crew in jeopardy. I also know what it is like to come home from several weeks of working on dangerous wildfires, walking in the front door, and seeing the look of utter relief when your wife and children know you have come home safe.

Firefighting is a dangerous business, and when you are out there, the only thing standing between you and trouble is your equipment and the brave men and women with you on the fire-line. That is why it is so critically important that we do everything possible to give these dedicated firefighters the training and resources they need to have success, both in completing the mission and ensuring they come home safe at the end of the day.

There is little doubt that wildfires are a bigger problem in this country than they were a decade ago. Drought and other factors have contributed to creating hotter, drier, and longer fire seasons, on average two months longer than in the previous decade. Six of the worst fire seasons since 1960 have occurred since 2000. This is not an anomaly. This is the new normal. Unfortunately, we are still doing business the old way and it is not working.

In some cases, the problems are complex and the answers are not easy to come by. However, in other cases, the answer is straightforward and the time for it to be implemented is long-overdue.

TRAINING CHALLENGES

In Audit Report 08601-54-SF (March, 2010) on the Forest Service's succession planning for firefighting, the U.S. Department of Agriculture (USDA) Office of Inspector General (USDA-OIG) noted that training and other challenges were "setting the stage for future shortages of qualified firefighters." They noted that 64% of essential fire command personnel would be eligible to retire in 2014, increasing to 86% by 2019. They also noted that there were only 5,199 trainees for 11,129 critical firefighting positions.

Consistency in training across agencies is essential. In any discussion of the challenges we face, we must first acknowledge the tremendous work of wildland firefighting agencies to improve operational interagency cooperation across jurisdictional boundaries. The development of a consistent certification and training system administered by the National Wildfire Coordinating Group (NWCG) is an outstanding achievement. However, jurisdictional and agency cultural barriers still exist.

The purpose of the Wildland Firefighter Apprenticeship Program (WFAP) is to take this consistency in training to the next level. NFFE is proud to be a founding partner in this interagency agreement developed to create the WFAP. The WFAP is a national interagency program registered through the U.S. Department of Labor and in partnership with the major federal land management agencies. The WFAP is designed to be complementary to the purpose of the NWCG regarding consistency in classroom training and certification. It was established to enhance consistency and a joint operations atmosphere between the federal agencies in both the classroom delivery and on-the-job training experiences of their employees initially entering career positions as firefighters. Unfortunately, the WFAP has been under-utilized and I am hearing reports that firefighting agencies may be turning away from it. This would be a step away from consistency, and a step in the wrong direction.

Another area of concern regarding training is simply ensuring that funding to support training and "trainee assignments" (in addition to classroom training, firefighters must work alongside fully certified personnel before achieving full certification to serve in a given position) is reaching the field in an adequate and timely way. This is not happening as consistently as it needs to. Here are a few examples of how this ongoing problem is occurring:

- An engineer on a fire engine crew in Southern California reports that primary fire personnel on his forest are unable to attend training classes that are only offered out-of-state and unable to go on trainee assignments because of lack of funding.

- A purchasing agent in Arizona reports she just received the fiscal year 2014 (FY14) budget in March, but she was recently informed that the cut-off date for significant procurements (which is normally August 30) has been moved up to June 15 because of the anticipated need to transfer funds to cover fire suppression costs (this "fire borrowing" is discussed later in this testimony). In other words, for 8-9 months of FY14, there is substantial uncertainty in the field about availability of funds.

- An interagency dispatch center manager describes the outcome of budget uncertainty on training decisions as follows: "The timing of the budget has a huge impact on our training. Training must typically be scheduled prior to getting the budget, but our managers don't know how much money we will have for training. Then, when we do get the budget, we may have training money but it is too late to get into classes. Plus, fire season has started and our firefighters are in the field fighting fire. This happens every year."

As even this brief description illustrates, the training challenge is complex and infringes on other topics (e.g., funding). However, Congress can improve the situation by doing the following:

1. Exercising appropriate oversight to ensure that (a) the action items developed as a result of USDA-OIG Audit Report 08601-54-SF are properly implemented and (b) the WFAP is used to its fullest potential.

2. Appropriating funds in a timely fashion so that funded training opportunities are not scuttled by budgetary uncertainty.

FUNDING CHALLENGES AND THE WILDFIRE DISASTER FUNDING ACT

Strong winds causing damage to communities happens to some degree every day in this country. Typically, wind-related damage is limited to a small area, and emergency responses to these incidents

are generally provided by local resources and personnel. However, every so often a larger event occurs, such as hurricanes, which can overwhelm local or even regional resources. These significantly bigger events can require a national response.

Similarly, roughly 99 percent of wildfires are local events that are handled by local resources and personnel. However, some fires escape initial attack and become catastrophic events that overwhelm local or even regional resources. Although only approximately one percent of fires become catastrophic wildfires, on average they account for roughly 30 percent of the cost of suppression.

Responses to catastrophic wildfire events, like responses to hurricanes, are national responses. Logically, the funding mechanism should be similar. However, because of nothing more than a historical happenstance, responses to hurricanes and wildfires are not funded the same way. Unlike the Federal Emergency Management Agency (FEMA) and other federal agencies that respond to national emergencies, Interior-funded agencies must pay for fire suppression using discretionary funding. With the occurrence and severity of wildfires increasing, the portion of the Forest Service discretionary budget that goes to fire suppression and preparedness has increased from 16 percent a decade ago to 45 percent today.

The substantial expense of fighting wildfires often exceeds the funds appropriated for wildfire suppression, an outcome not expected to change in the coming years. When this happens, the U.S. Forest Service and the Department of the Interior (DOI) transfer funds from other programs into firefighting accounts to cover the shortfall. This so-called "fire borrowing" results in cancellations and delays in the agency's on-the-ground program of work. To make matters worse, these transfers tend to occur late in the fiscal year, at the highpoint of the field season, when project execution is ready to occur. The Forest Service and DOI are forced to abruptly halt critical projects to provide funds for wildfire suppression. Ironically, some of the cancelled projects are those designed to reduce the frequency and severity of catastrophic wildfires. Agencies end up robbing Peter to pay Paul, even though by doing so they know they are increasing what they'll have to pay Paul in the future. They are forced into this scenario by an illogical funding structure that is unlike that of all other emergency response activities.

To address this problem, NFFE strongly urges Congress to pass the Wildfire Disaster Funding Act (WDFA, S. 235 and H.R. 167). The WDFA would provide "additional new budget authority" as the amount specified in an appropriations Act for a fiscal year to pay for wildfire suppression operations, but only to the extent such authority exceeds 70 percent of the average costs for wildfire suppression operations over the previous 10 years. This would leave intact the way funding is provided for handling 99 percent of wildfires, but cap adjustments would deal with the unpredictable catastrophic events. The WDFA would not use FEMA funding and would not affect FEMA's Disaster Relief Fund. It would not add to discretionary spending. It would prevent the "fire borrowing" that has decimated land management agencies in recent years and is otherwise poised to increase.

FUNDING CHALLENGES – MANAGING THE LAND

When it comes to the cost of wildfires on communities, the actual cost of fighting the wildfires, while substantial, is only the tip of the iceberg. A few years ago, the Western Forestry Leadership Coalition published a study entitled, "The True Cost of Wildfire in the Western U.S." For six large fires, the report looked at costs other than just suppression costs, in order to get a better handle on the true cost of these events. True costs ranged from double the suppression cost to 29 times its cost. On average, the true cost exceeded the suppression cost by a factor of 11.

Unhealthy forests substantially increase the risk of catastrophic wildfires. Just looking at the economic bottom line, treatment and restoration as measures to reduce the risk of catastrophic wildfires is cost effective. For example, an April, 2014 study by the Forest Service, Nature Conservancy, and Sierra Nevada Conservancy showed that, for fire-adapted forested watersheds of the Sierra Nevada and the Western United States like the Upper Mokelumne Watershed, treatment costs were one-half to one-third of the cost of suppression.

It does not take a Ph.D. in fire ecology to understand this point. I can assure you that firefighters on the front lines understand it even better. In preparing for this testimony, we specifically reached out to some of our members who are firefighters on the 9,400 acre 100 Mile Creek Fire in Alaska for their thoughts. This is from a front-line firefighter, sent from the field on his iPhone:

"Being proactive instead of reactive when it comes to slowing and stopping fires is what needs to happen. We are failing by not focusing on the real problem enough, which is defensible spacing around homes and communities. A lot of jobs could be created and funded if more money was set aside solely for thinning out the forests. When these fuel breaks are created and maintained the threat and need for huge suppression efforts and costs is reduced. Commercial logging and biomass utilization projects can and should come in to play here as well... Successes such as the fuel breaks around the Kenai National Wildlife Refuge during the Funny River Fire... need to be broadcast and showcased to the public."

And these observations came from an Alaskan fire manager:

"In Alaska, we do have a well-constructed, tactical plan to deal with fires. But, with the weather changing to drier conditions, human error, lightening, campfires, burn barrels, etc., wildland fires are on the increase. I see the issue as two-fold: 1) We have let forests get into a state of overgrowth and decay, thereby causing wildland fire occurrences to increase in recent years. More equipment and more thinning of the forests may decrease the number of fires in a season, as well as, allow for larger areas to be treated. 2) There is an increased number of people that are moving into wildland areas now, which has increased the number of wildfires in these remote areas. In Alaska, we fight to put the fires out immediately, we address the hazardous fuels, but sometimes forests are allowed to grow into a dangerous overgrowth causing a hazardous situation. We address the hazardous overgrowth to the best of our ability during the season."

We face enormous challenges. Many of our forests are unhealthy. Even with passage of the WDFA and the end of "fire borrowing," resources committed to prevention are not adequate for the task at hand. Unless we prioritize restoration of forest health and preventative treatments to decrease the risk to dwellings and other structures in the wildland-urban interface, preparedness and suppression costs will continue to rise.

CONCLUSION

I mentioned at the beginning of my testimony that some answers were straightforward. The answer to how to fund catastrophic wildfire is the WDFA (S. 235/H.R.167). Further, we need a collaborative and comprehensive system for maintaining healthy forests to reduce the risk to structures in the wildland-urban interface – which will, over time, stabilize preparedness and suppression costs.

It is time for Congress to take action to provide the resources and the flexibility necessary to protect

communities across our nation from wildfire. These reforms cannot wait until next year. They need to be acted on immediately.

I appreciate the Committee's decision to hold a hearing on this matter and I thank you for the opportunity to provide testimony.

Testimony of Ken Stewart

Chair, Board of Trustees, American Forest Foundation and

Deputy Director, Renewable Bioproducts Institute, Georgia Institute of Technology

November 5, 2015

Before the

U.S. Senate, Committee on Agriculture, Nutrition, and Forestry

Hearing on Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands

Chairman Roberts, Ranking Member Stabenow, other distinguished Senators, thank you for the opportunity to share the views of the American Forest Foundation (AFF) and the 22 million family landowners in the U.S. that AFF works with, on the issue of wildfire and the budgetary impacts and threats to natural resources on federal, state, and private lands.

AFF is a non-profit conservation organization that works on-the-ground with families, teachers and elected officials to promote conservation and stewardship and protect our nation's forest heritage. Our goal is to engage and support the nation's more than 22 million family forest owners, who care for the largest portion of America's forests, to sustain the benefits we all enjoy from our forests: clean air and water, wildlife and fish habitat, forest products, and recreation opportunities, to name a few.

In addition to serving as the Chair of AFF's Board of Trustees, I retired from Georgia Tech (GT) but am continuing to work as Deputy Director, Renewable Bioproducts Institute at GT. The Renewable Bioproducts Institute was recently created from the Institute of Paper Science and Technology in order to represent the broader pulp, paper and green chemicals, fuels and materials industries. We believe bio-based, renewable raw materials including cellulose will be the backbone of the chemicals and materials industries of the future.

I also bring over four decades of experience from both the corporate and government sectors, most of which has been in forestry. Just prior to my role with Georgia Tech, I served as Commissioner for Georgia's Department of Economic Development, where much of my work was focused on enhancing Georgia's significant forest-based economy. The forest products industry is still the 3rd largest employer in Georgia as is the case in many southeastern states. Prior to that, I served as Georgia's State Forester, where I was responsible for the stewardship of 24 million acres of Georgia's forest land, both public and private lands, leading the 600 person Georgia Forestry Commission.

Mr. Chairman, members of the Committee, you may be familiar with a new report just released by the American Forest Foundation, which tells a new piece of the story regarding the wildfire threat in the West. The report, included along with my testimony, *Western Water Threatened*

by Wildfire, which I'd like to request be inserted into the record, highlights, in a first of its kind analysis, how the wildfire threat in the West is not just a public lands issue. The report shows that over one-third of the lands in the West with high fire threat are private and family land. What's more, the report demonstrates that over 40% of the lands at high fire threat in critical watersheds, are private and family-owned lands, highlighting the threat wildfires pose to drinking water supplies.

Wildfire Threat's Impact on Water

As this Committee knows, wildfires, especially the catastrophic wildfires we've seen of late in the West, cause devastation to homes and lives and communities, wildlife and fish, and air quality. With more than 9.2 million acres burned in 2015 alone, making 2015 one of only four years since 1960 to see more than 9 million acres burn, there are few communities in the West that haven't been touched by the impact of wildfire. The drought in the West, combined by the overly-dense conditions of forests, make it not a question of whether, but when, Western forests will burn.

While wildfires are a natural part of the West's forest ecosystem, the drought and fuel buildups in the west have resulted in abnormal, catastrophic wildfires, that burn extremely hot, charring soils and vegetation, making recovery to a healthy ecosystem a much more difficult process.

But wildfires, especially catastrophic wildfires, don't just impact the forests and the people and wildlife that live in and around them. The impact of these fires is often felt hundreds of miles away in communities, cities and municipalities that rely on upstream forests to purify and store their water supplies.

While only 30% of the West is forested, some 65% of the West's water supply is cleaned and stored by forests. This natural filtration and storage is essential for no less than 64 million Westerners who rely on surface water flowing from forested headwaters to meet their daily needs. In drought conditions (in some areas we are seeing the worst drought conditions on record) this water supply is more than critical to Westerners and the agriculture and other businesses that rely on it.

Many Western communities are now feeling the aftermath of this summer's severe wildfires, as the rains begin and the charred landscapes burned by catastrophic wildfires now become sources of contamination and sedimentation in critical water supplies. Just last week, for example, California Geological Survey issued an advisory to California residents to be aware of increased potential for landslides, particularly within the perimeter of this summer's Butte fire.

When wildfires burn extremely hot, it hardens the soil, forming almost a "parking lot" effect. The soils and trees no longer filter containments and sedimentation from the water or store the water to release it gradually—it runs into streams and rivers that run directly into reservoirs and water storage facilities. Municipalities then need to spend, in some cases millions of dollars, treating their water supply to ensure continued fresh drinking water.

Impact of Wildfire Felt Outside the West

While AFF's report highlights the challenges in the West, wildfire is not just an issue in the West. Wildfires have significant impact on forests and communities east of the Mississippi as well. The south, Mississippi, Louisiana, and Texas, just recently had another flare up of wildfires that luckily have been slowed by the rains now heading across the south.

In my tenure as Georgia's Economic Development Commissioner, we saw the largest wildfire in Georgia's history—which, combined with several other significant fires came to be called the Georgia Bay Complex. This fire burned over 564,000 acres in Georgia and Florida between April and June of 2007, among the 25 largest fires in the U.S. since 1997. This fire complex, caused more than $60 million in damages to Georgia's forest land, making it both a safety and economic issue in Georgia.

But even for those of us who live where wildfire is not a significant threat, wildfires should still be top on our minds.

The cost to fight these growing wildfires continues to rise. This year, the US Forest Service alone spent close to $3 billion on firefighting. In a no-increase budget situation like we are faced with right now, because these firefighting expenses are budgeted for within the Agency's normal spending, the rising costs of firefighting means that other agency program shrink. This includes programs that work to prevent wildfires on both public and private land, as well as those that address a myriad of other forest issues from insects and disease to development pressures.

In 1995, the US Forest Service spent $367 million to fight fires, some 16% of the Forest Service budget. In 2025, the Agency predicts it could spend close to 67% of its budget fighting fires, meaning it has some half a billion less to spend on preventative efforts and other critical forest issues.

Between the last fiscal year and this year, the 10-year average - used to calculate the suppression budget - increased by $115 million and non-firefighting programs were reduced by that equivalent.

We estimate that in the last five years, State and Private Forestry programs, including those that fund State Fire Assistance as well as non-fire programs, have seen roughly a 12% decline in funding, and some programs like the Forest Service Forest Health program have seen as much as a 22% decline in funding in this same time period.

What's worse, even as wildfire costs are consuming more and more of the Forest Service budget, the Agency has also, in 8 of the last 15 years, still run out of firefighting funds before the end of the fiscal year, forcing the Agency to "borrow" from other programs. This year, the Forest Service borrowed some $700 million from non-firefighting accounts, including preventative accounts and accounts that help address issues outside of the West, like invasive

species and other challenges. While we're grateful that Congress acted quickly to repay these accounts, the impact is still felt when programs are halted mid-season and in some cases work cannot be resumed until the next season.

The impacts of this fire funding issue, on states like Georgia and on private and family landowners across the country, especially in the south, is significant. With the shrinking budgets and the disruptive borrowing, programs that provide private and family landowners with technical assistance to get ahead of wildfire problems are significantly short changed. But there's other non-fire impacts as well. Programs that help detect and prevent spread of invasive and native insect and disease issues, like the hemlock wooly adelgid or the Syrex Wood Wasp are also impacted. In 2012, due to the fire borrowing, a multi-state effort to improve forest resilience, which include significant coordination across states, was cancelled.

The impact is not just on programs that provide assistance to private and family landowners. Important research and development efforts, such as those that help stimulate new markets and infrastructure to support the needed restoration treatments on the landscape, are also stymied by this fire funding issue.

Solution to Reducing Wildfire Threat Must Include Both Public and Private Lands, Landscape Approach

To address the growing wildfire threat in our forests, while also reducing wildfire fighting costs in the long-run, AFF's report demonstrates there is a clear need to address the wildfire threat on private and family lands, in addition to public lands. Since more than 40% of the lands facing a significant wildfire threat in critical watersheds are private and family lands, action on both public and private lands, especially given the patchwork of ownership, is needed to truly address this significant threat.

Treatments such as thinning overly dense stands and in some cases prescribed or wildland use fire are needed. This will reduce the fuel for wildfires, helping ensure that when wildfires happen, they do not burn with such intensity to damage the watershed and water supply.

But even then, if we're to protect communities and water supplies, silo treatments on public and private lands will still not be enough. Wildfires don't respect property lines and if treatments aren't coordinated to achieve sufficient scale in a landscape, the work of one or two landowners to reduce wildfire threat can very quickly be consumed by a catastrophic wildfire that burns through neighboring land that hasn't been treated. We must take a landscape approach with fire treatments, where treatments on both public and private lands add up to a scale that will truly address the wildfire threat and protect the watershed from catastrophic wildfire.

For example, in Oregon's Blue Mountains, federal and state agencies, university extension programs, and national, state, and local non-profits are partnering to help landowners restore their forests and reduce their fire risk across nearly 200,000 acres, complementing the work of

their neighbors- both public or private- all in an effort to increase by four-fold the pace and scale of cross-jurisdictional forest restoration.

Private and Family Landowners Are Ready to Act

We know how to reduce the wildfire threat. We also know that private and family landowners are ready and motivated to take action on their land. AFF's report includes the results of a West-wide survey of landowners that shows most landowners are aware of the threat and, ready to act, to be responsible stewards. In fact most are more concerned about fire today than they were five years ago.

But AFF's survey also uncovered that only 25% of Western landowners plan to take action in the near future to thin their forests.

Why this disconnect? If landowners are concerned and motivated, why are only a few of them planning to act? AFF's report also uncovered two very significant barriers to private and family landowner action: cost and lack of neighboring land action.

While landowners want to be responsible stewards and understand the responsibility they have to take care of the land, the cost of treatments for many is insurmountable. Landowners will contribute their own money, time, and effort but even then, that's still not enough for many, especially when treatment costs run several thousand dollars per acre in some parts of the West. The need for action and high cost are largely due to influences and circumstances outside the control of landowners: the prolonged drought and record high temperatures are making forest health conditions worse, and the loss of market infrastructure in many parts of the West makes treatments very costly.

Lack of neighboring land action is also a serious barrier to private landowner action. While landowners are willing to put in their own resources, they know that if their neighbors, whether they are public or private landowners, don't also take action, their work could be for nothing. Thus, a landscape approach makes sense both ecologically and as a strategy to motivate private and family landowners.

Strategies that help reduce costs, provide landowners with both technical and financial assistance, and support a landscape approach, will go a long way towards empowering private and family landowners to take action.

Policy Can Address Growing Cost and Threat Posed By Wildfires

The good news is this: we know how to reduce wildfire threats and protect water supplies; we know that the solution needs to include both public and private lands in a landscape approach; and we know private landowners are willing to take action if we can help address their biggest barriers. We also know how to fix the problems with how wildfire fighting is paid for at the federal level.

Addressing all these issues will help reduce the cost of fighting wildfires in the long-run and will help reduce the local community costs of cleaning up water supplies in the aftermath of wildfires.

A set of policy solutions can be enacted to help support and address these issues. AFF's report includes a set of solutions that we believe can garner bi-partisan support:

- First, we need to fix how wildfire fighting is funded at the federal level. Congressional action is needed so that wildfire fighting costs, especially those costs that are truly catastrophic in nature, are treated like other federal disaster emergency funding. The solution must address both the rising costs of wildfire fighting that leads to continuous shrinking of other programs and the disruptive practice of fire borrowing.

- Secondly, authorities and funding are needed to better enable treatment on the ground on private and family lands and support a landscape approach. While there are a range of authorities and funding sources to address fire mitigation, most do not take a landscape approach or coordinate work on both public and private land. Most also do not offer significant resources for private lands work.

  AFF has found success in several landscapes in the West, as well as in other parts of the country, through a collaborative, coalition approach that brings all the various organizations, landowners, and other stakeholders together in a landscape to develop and implement a landscape strategy. These successful efforts, supported in part by the US Forest Service and Natural Resource Conservation Service, have involved coordinated private landowner outreach, reducing duplication of resources, to provide landowners with the needed technical and financial assistance in support of the larger landscape goals. We recommend examining existing authorities, in both the US Forest Service and the USDA Natural Resource Conservation Service, to find ways to encourage strategies such as these successful landscape scale efforts.

- Third, we need to find ways to catalyze market infrastructure to support the needed restoration work on-the-ground. There will never be enough public funding to support all the needed restoration work, but public funding can help stimulate private sector investments. Catalyzing infrastructure, including mills, loggers, foresters, that can work on both public and private lands to remove the restoration by-products and make use of these byproducts, will go a long way towards reducing treatment costs. Concentrating public investments to support infrastructure where the work is happening on public and private lands, will mean a better return on the investment. Additionally, public investments are needed to encourage research and development in new market uses of restoration by-products, such as nano cellulosic technologies, new building technologies that use wood, and biomass energy technologies.

Thank you Mr. Chairman, Ranking Member Stabenow, members of the Committee for your time and attention today. I look forward to responding to any questions you may have.

Chris Treese
Manager, External Affairs, Colorado River Water Conservation District
Board Member, National Water Resources Association

Testimony Before the United States Senate
Committee on Agriculture, Nutrition, and Forestry

Hearing on:

Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands

November 5, 2015

Introduction

Chairman Roberts, Ranking Member Stabenow, Senator Bennet and members of the Committee, thank you for holding this hearing today and for your attention to the important issue of wildfire and its effects on water supply and our nations' natural resources. I would like to thank the Committee up front for its extensive work to address wildfire and other watershed-focused issues in the 2014 Farm Bill.

My name is Chris Treese, I respectfully offer this testimony on behalf of the Colorado River Water Conservation District (Colorado River District) and the National Water Resources Association (NWRA).

The Colorado River District is the principal water policy and planning agency for the fifteen counties of northwest and west central Colorado. The River District is responsible for the conservation, use, protection, and development of Colorado's apportionment of the Colorado River. The River District comprises approximately 29,000 square miles, roughly 28% of the land area of Colorado. Seventy percent of our district is federal lands, and of those lands, the majority are managed by the U.S. Forest Service (USFS).

I also serve on the board of directors of the National Water Resources Association (NWRA). NWRA represents state water associations, irrigation districts, municipal water providers, end water users and their collective interests in the management of irrigation and municipal water supplies throughout the western United States and portions of the South. NWRA members provide safe, reliable water to millions of individuals, as well as families, agricultural producers, and other businesses throughout the U.S. For more than eighty years NWRA has worked to provide water in a manner that provides both economic and ecosystem benefits to communities and our natural environment.

Improving the condition of our nation's forested lands is of primary importance to water providers. National Forest lands are overwhelmingly the largest, single source of water in the U.S. and, in most regions of the west, contribute nearly all of the water that supplies our farms and cities.

The unhealthy state of our national forests, which were reserved specifically to protect water resources, has led to catastrophic wildfires that threaten the reliability, volume, and quality of water for tens of millions of Americans, along with the wildlife, recreational, and multi-purpose values of these lands. Large-scale, catastrophic wildfires today are more frequent and significantly larger than in the past, even the recent past. In Colorado alone, from 2004 through 2007, fires burned an average of 40,000 acres annually. However, from 2008 to 2015, that annual average jumped to 140,000 acres.

We greatly appreciate the Committee's attention to this important issue and believe it is critical that both forest management reforms and resolution of the "fire borrowing" issue are addressed in comprehensive legislation focused on improving the health and resiliency of our forests. Only by addressing both of these issues together can we ensure that on-the-ground forest management and restoration activities will proceed at the pace and scale equal to the problem and begin to improve the forest conditions that led to the devastating and costly fire season this summer and of the recent past.

Watersheds and Forest Health

The forested lands of the United States play a vital role in the water supply that much of our nation depends on. This relationship is no accident. The protection of the headwaters of our nation and "securing favorable water flows" is one of the foundational purposes of the National Forest System. Healthy forests provide a myriad of watershed, ecosystem, and recreation benefits. In a healthy forest ecosystem wildfire can be a natural, regenerative force. Unfortunately, as members of this Committee know, throughout much of the U.S. our forests are not healthy. This is particularly true in the western United States.

A healthy watershed, which in the West almost invariably originates on National Forest land, provides multiple environmental and health and human safety benefits. A healthy forest will mitigate both droughts and floods, create and protect a healthy and functional soil profile, remove and decompose pollutants, maintain biodiversity, provide natural beauty, and provide sustainable, high quality water.

Deteriorating forest health conditions impact numerous elements of water management including the hydrologic characteristics of watersheds: runoff timing, water yield, sediment transport, water temperature, and water chemistry. Unhealthy forests are increasingly prone to catastrophic wildfire. Fires that once burned with low intensity are now burning with greater severity, overwhelming exponentially more land and are scaring, instead of rejuvenating, landscapes.

The pervasive spread of pine beetle, spruce budworm, and other insect infestations have changed the landscape of our western forests for generations. Natural succession will occur, and someday these forests will again be dominated by pine and spruce trees, but for at least two generations of forest enthusiasts this landscape is forever altered. Whole forests today consist predominantly of standing dead trees, representing an obvious and immediate fire hazard, but as those trees fall their entropic tendency to form a "match stick" weave of

dead trees on the forest floor represents an exponentially greater likelihood of high intensity, catastrophic wildfire. These conditions must be addressed.

The 2002 Hayman Fire in Colorado was a high intensity fire that, within the 138,000 acres involved, burned 7,000 acres above Denver Water's Cheesman Reservoir. That wildland fire's conflagration spread as a crown fire but immediately dropped to a manageable and dramatically less destructive ground fire upon reaching the area above Cheesman that had been mechanically thinned prior to the fire.

Wildfire and Water Supply

High intensity wildfires have both immediate and long term impacts for water users. Wildfires can dramatically and adversely affect source-water quality, interrupt water storage opportunities, obstruct hydropower generation, hinder water delivery, and adversely affect downstream communities and ecosystems reliant on water originating on that forest. Even communities hundreds of miles downstream of the fire may be affected by the aftermath.

Key water and power infrastructure is increasingly at risk of wildfire's devastating effects. When fire affects this infrastructure there are both immediate and long-term impacts. This summer, the Pacific Northwest suffered a series of catastrophic wildfires. Fires burned through thousands of acres of forest, destroyed homes and businesses, and tragically took the lives of multiple wildland firefighters. One of these fires, the Chelan Complex fire, threatened the water supply operations of the Greater Wenatchee Irrigation District (GWID).

The Chelan Complex fire cut GWID off from its vital water supply when it knocked out the power infrastructure that GWID relies on to deliver water. GWID draws water from the Columbia River, but with no power it was unable to access its primary water supply. In order to bring a portion of its supply back online, GWID borrowed two 480-volt generators from the Bureau of Reclamation and also drew power from several smaller generators. These efforts, however, only rehabilitated a portion of its water supply. For almost a week, GWID's ability to deliver water was reduced by approximately 80 percent, going from 10,000 gallons per minute to 1,900 gallons per minute. Despite GWID's best efforts, the lack of water increased stress on high value tree crops, reducing productivity. The fire also destroyed a water supply pipeline, which will cost the district hundreds of thousands of dollars to replace.

Even if water providers are able to survive a fire event without losing infrastructure, they still face significant challenges. Many of wildfire's biggest impacts to water supply come once the fire is out. The flooding and associated erosion that too often follow a wildfire create a major threat to water supplies.

In a healthy forest watershed, vegetation holds soil in place and slows runoff, giving water time to soak into the ground. Under healthy forest conditions, a critical portion of rainfall and snowmelt is absorbed by the ground then percolates slowly through the soil later

emerging down-gradient on the surface, thereby providing a year-round supply of stream flow. Wildfires remove vegetation, bake soils to the point of impermeability, and almost guarantee post-fire flooding and erosion. High temperature wildfires, like those increasingly experienced in the West, exacerbate this problem by altering soil composition. When vegetation burns, it releases gases that can penetrate the soil. As the soil cools, these gases condense forming a water resistant, waxy layer on the ground, rendering the soil hydrophobic. High temperature wildfires also bake clay soils resulting in a vitrified, or almost ceramic, surface impermeable to rain and snowmelt. Soil can remain hydrophobic for several years after a fire has burned.[1]

The lack of vegetation and hydrophobic soils increases the probability of severe erosion, floods and surface water pollution to rivers, lakes and reservoirs. The level of increased erosion is significant. In 2003 water providers, including the River District, worked with the Department of the Interior and Colorado State University to study the relationship between forests and water. This research found that in severely burned areas peak runoff rates can increase by a factor of 10 or more, and erosion rates may be multiplied 100 times relative to unburned areas.[2]

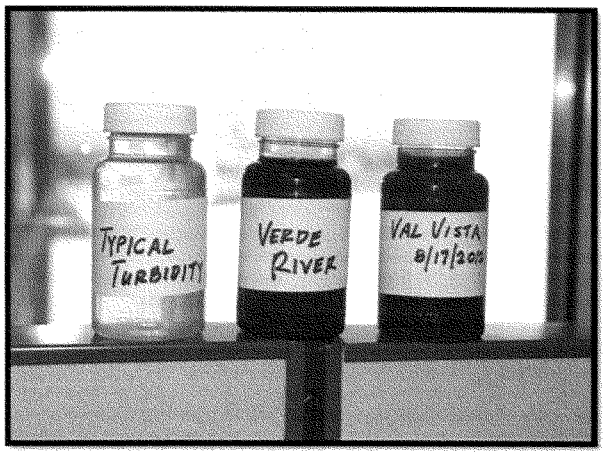
Mitigating these effects puts severe strain on local water providers. Denver Water estimates it has spent in excess of $27 million in the past ten years due to post-fire conditions, primarily erosional impacts.

Post-fire water supplies often see an increase in turbidity, metals content, and nutrient loads, turning clear, mountain streams the color of coffee – or worse. Beyond mere aesthetics, these are issues that must be addressed for health and human safety during water treatment. Cleaning this water to a standard safe for consumption adds substantial expense and strain on existing facilities.

These additional treatment costs are not insignificant. In Arizona, the Salt River Project (SRP) has seen significant increases in sediment in its water supply post-fire. The increase in organics and sediment in the SRP water supply from fires, coupled with ever-stricter water quality standards, have directly led to increased capital and operating costs at municipal water treatment plants. In many cases treatment facilities had to be upgraded by adding carbon filtration to handle the increased levels of organics and sediment at a cost of hundreds of millions of dollars.

---

[1] Dell Rae Moellenberg, *"Colorado State Experts Search for Signs of Life at Hayman Fire Site, Investigate Erosion and Water Pollution Prevention."* Colorado State University, February 18, 2003.
[2] Lee MacDonald and John Stednick, *"Forests and Water: A State of the Art Review for Colorado."* Colorado State University, 2003.



Example of post fire turbidity levels in Arizona's Verde River Basin. Image courtesy of the Salt River Project.

Storage and Hydropower Impacts

Post-fire erosion and debris flows also cause problems for water storage and hydropower generation. Increased levels of sediment and debris eventually flow into water storage facilities. This displaces capacity dedicated to water supply storage. Mitigating the increased flow of sediment is a difficult, expensive, and multi-year problem.

In Colorado, summer rains following a major wildfire in the watershed that feeds Denver Water's Strontia Springs Reservoir washed more than one million cubic yards of ash and debris into the reservoir. This significant inflow of solids filled the reservoir to seven percent of its capacity, requiring Denver Water to spend more than $16 million just on reservoir dredging that ultimately proved only marginally successful.

The water supply infrastructure of the West also plays a critical role in the generation of carbon-free, hydroelectric power. This generating capacity can also be affected by wildfire. Last year, in Northern California's Placer County, the King Fire burned a total of 156 square miles. Sixty percent of the fire burned at high intensity. This fire directly affected the Placer County Water Agency (PCWA) and its operations. PCWA provides drinking water for 250,000 citizens and enough renewable hydroelectric energy for 100,000 homes.

The King Fire stripped vegetation from the watershed that PCWA depends on. Precipitation events in areas burned in the King Fire have already affected PCWA, increasing the amount of sediment and debris flowing off the watershed. Once this debris entered lakes and reservoirs, it displaced valuable storage space, blocked spillways and intakes, and ruined equipment and generating machinery.

PCWA estimates that it incurred $8 million to repair and protect its water and energy infrastructure immediately after the fire. Costs for 2016 could reach $10 million and continue for years. Debris could fill the reservoir and negatively affect water releases and hydropower generation.

The USFS estimates that over 300,000 tons of topsoil are poised for further erosion into the Rubicon River from the burned area. This means that PCWA customers' water and power supply will be threatened for years to come and will be subject to these cleanup costs again and again.

Environmental Impacts

Obviously, humans are not the only one that suffer when sedimentation in water increases. High sedimentation also adversely affects aquatic species, some requiring dramatic and costly rescue.

In 2012 biologists scrambled to protect fish in New Mexico from the aftermath of the Whitewater–Baldy Complex fire. On May 9, 2012, lightning in the Gila National Forest started one of the largest fires in New Mexico's history, burning almost 300,000 acres. After much of the fire had subsided in key habitat areas, a team from the U.S. Fish and Wildlife Service, the USFS, and New Mexico Game and Fish initiated collection, evacuation and relocation of Gila trout, one of the original species listed under the Endangered Species Act, from creeks in the burn area.[3]

Human Toll

While others testifying before this committee will address the cost of wildfire in human terms, I want to emphasize that my relatively light treatment of this sacrifice does not reflect a lack of concern or appreciation for the risks willingly assumed by these professionals. I live in Glenwood Springs, Colorado, site of the 1994 South Canyon fire and the largest, single loss of professional wildland firefighters' lives – until the Yarnell Hill, Arizona tragedy two years ago. The tragic deaths of 14 wildland fire fighters who came from other states to protect our small town has forever changed my community and our appreciation for the sacrifices these professionals accept for others every day.

Fire Borrowing

In 2015, fire suppression costs will exceed 50% of the entire USFS budget for the first time. In 1995, firefighting made up only 16% of the USFS's appropriated budget. Left unchecked, by 2025 fire costs could command more than two-thirds of the USFS budget. This would mean almost $700 million being diverted from non-fire programs. No agency can sustain its mission with this level of unplanned, diverted funding.

---

[3] Susan Montoya Bryan, "Raging N.M. Fire prompts rescue of threatened fish," Washington Post, June 18, 2012. http://www.washingtonpost.com/national/health-science/raging-nm-fire-prompts-rescue-of-threatened-fish/2012/06/16/gJQAJaVJlV_story.html

Since 2001, "fire transfers" have resulted in a 24% reduction to the USFS Vegetation & Watershed Management program. Ironically, this program includes pre-fire mitigation efforts that would otherwise reduce the likelihood and magnitude of wildfires. This trend directly hinders the work we're able to do in partnership with the USFS to protect our watershed lands, water resources, and system infrastructure.

Next Steps to Protect our Nations' Water Supply

There is a deep body of science and empirical evidence, as well as an increasing, though regrettable, amount of practical experience, that demonstrate the need for and importance of proactively managing our forests to protect water supply, water quality, terrestrial and aquatic habitats, and the broad range of other natural and socio-economic benefits that our forests provide.

I know that this Committee and members of Congress on both sides of the aisle recognize the importance of responding to our nations' forest health needs. I am particularly proud that my Congressional representatives, Senator Bennet, Senator Gardner and Congressmen Tipton and Polis have all introduced or cosponsored legislation aimed at addressing wildfire and forest health issues.

Partnerships:
Many of NWRA's members are currently involved in forest restoration projects aimed at improving forest conditions and protecting vital water supplies. We are investing tens of millions of dollars annually in restoration efforts, often using local funds to treat federal lands. Additionally, we are actively engaged in educating the public on the importance and benefits of forest health.

In Arizona, the Town of Payson, USFS, Bureau of Reclamation, the National Forest Foundation and Salt River Project signed a Memorandum of Understanding (MOU) on July 17, 2014. The MOU aims to reduce the threat of severe wildfire in and around the watersheds that drain into the C.C. Cragin Reservoir. The partnership was formed in response to the need for forest restoration activities on 64,000 acres to protect the C.C. Cragin reservoir, a water supply to the Town of Payson, Salt River Project and communities in northern Gila County. However, this project is just one example of a collaborative project of critical priority that must undergo environmental compliance processes that are expected to take at least two years before fuel reduction activities can begin on the ground. That leaves endangered species, the greater ecosystem, and the public's water supply vulnerable for at least two more fire seasons, despite the known risks of delay.

Legislation:
Federal actions must address both fire suppression funding and the planning and compliance processes in order to accelerate the pace and scale of work needed to protect our forest lands and water supply. Federal agencies must be directed and empowered to work together and assign responsibilities to avoid duplication. In an era of limited funding,

agencies must break down institutional silos of responsibilities and "turf" in order to fulfill Congressional intent.

Federal environmental permitting delays and lack of inter-agency communication and cooperation represent harmful and costly delays to many of these efforts. The all-too-common criticism of federal paralysis by analysis is especially costly in the context of pre- and post-fire mitigation. And I am not overstating when I suggest these costs are too often measured in human lives.

I commend this committee for including authorization in the 2014 Farm Bill of categorical exclusions (CE) for forested areas plagued by insect and disease. This provision has already been exercised in at least one of the national forests in my district. The Good Neighbor Program, which the Farm Bill continued, has been extremely beneficial, allowing coordinated treatment of adjacent private and USFS forested lands.

Additionally, I want to thank this committee for authorizing and funding the Regional Conservation Partnership Program in the 2014 Farm Bill. This innovative, competitive grant program provides another important opportunity for cooperative partnerships in furtherance of healthy watersheds, and one in which I'm pleased to report our district is actively engaged.

I am pleased and proud of Senator Bennet's introduction of the bi-partisan **S. 1997**, "the PREPARE Act of 2015." Recent mega-fires in the West have illuminated the fact that the Federal Emergency Management Agency's (FEMA) programs for disaster response and emergency assistance are not well adapted for wildfires. FEMA's programs and investments offer a minimal role for wildfire mitigation work, especially pre-wildfire prevention activities.

S. 1997 addresses both pre- and post-disaster mitigation deficiencies in current law and budgeting. While summertime wildfires have become a normal occurrence in the western U.S, over the last decade only about 0.5% of all projects funded by FEMA's Hazard Mitigation Assistance programs went to wildfire projects. In 2014, only 0.4% of all Pre-Disaster Mitigation funding went to wildfire mitigation.

NGOs, the water community, agriculture, industry, and federal land management agencies all share common interests in healthy forests. Across the west, countless partnerships have developed to provide both wildfire prevention and remediation efforts.

Another bill that I commend to the Committee's consideration is **H.R. 2647**, the Resilient Federal Forests Act of 2015. Both the Colorado River District and NWRA have endorsed this legislation and are not alone in this support. More than 170 organizations have endorsed this legislation including tribes, sportsmen organizations, agriculture groups and more than a dozen entities that represent water users.

H.R. 2647 builds on the good work this Committee did to address forest health needs in the 2014 Farm Bill. It incentivizes collaboration with local governments and stakeholders by expediting environmental review for collaborative projects up to 15,000 acres in size. It

also includes important provisions that will increase the yield and protect the quality of our headwaters. Importantly, H.R. 2647 also addresses "fire borrowing," where federal land managers must raid non-fire suppression accounts to pay for suppression activities. This practice has negatively affected funding for wildfire preparedness, forest restoration, and other activities. H.R. 2647 ends this practice by allowing FEMA to transfer funds to the USFS and Bureau of Land Management when all fire suppression accounts have been exhausted. Paying the bill for wildfire response must not come at the expense of programs that proactively address deteriorated forest conditions and reduce the risk of wildfire.

My mention of and our support for particular bills does not mean we think that they are perfect, nor that other wildfire bills, such as those authored by Senators Wyden, Heinrich, and others, are without merit. However, we are adamant that forest management reforms, increased partnership opportunities, and resolution of the "fire borrowing" issue must all be addressed in legislation and focused on improving the conditions of our forests and protecting the myriad benefits we derive from healthy forests. It is critical that we address these issues together. Additionally, federal policy and practice must recognize the savings from and superior return on pre-wildfire, prevention investments over those of post-wildfire mitigation.

Conclusion

Let me emphasize, the importance of long-term solutions. We did not arrive at the current conditions of our forests overnight, and we do not believe immediate resolution is possible. However, immediate action is imperative. The western water community that overwhelmingly relies on water supplies originating on our forests is committed to working constructively over the long term with our federal partners to correct the conditions of our national forests and our watersheds.

We urge Congress to embrace the immediacy of the need and the importance of resolving these critical conditions. NWRA and the Colorado River District recognize that providing a safe, affordable and reliable supply of water is worth the extraordinary efforts required.

Again, my sincere appreciation to the Committee for this opportunity and your attention to this vital issue.

November 5, 2015

Testimony of Trout Unlimited to the Senate Committee on Agriculture, Nutrition, and Forestry hearing on: Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands

Chairman Roberts, Ranking Member Stabenow, and Committee Members:

My name is Chris Wood. I am the President and CEO of Trout Unlimited. Thank you for the opportunity to testify today on wildfire management on Forest Service lands. The Committee is right to focus on this issue. High levels of wildfire spending, including wholesale borrowing from other National Forest budget items are substantially undermining the ability of the Forest Service to conserve our valuable National Forests.

I offer the following testimony on behalf of Trout Unlimited and its 155,000 members nationwide. TU's mission is to conserve, protect and restore North America's trout and salmon fisheries and the watersheds they depend on. Much of this work occurs on federal lands – including through a very productive partnership with the Forest Service on National Forest lands.

As CEO, I have the great privilege to help guide TU's conservation work on the ground in our outstanding National Forests. But to add to my good fortune, prior to my role with Trout Unlimited, I worked at the Forest Service as an advisor to Chief of the Forest Service, Mike Dombeck for 5 years, and before that I worked for the BLM for 5 years. Service to the public lands is in my blood. I can assure you that love of our public lands is deeply rooted in millions of Americans and especially among TU members. Forest Service managed lands are immensely important to Trout Unlimited members as 50 percent of the nation's blue-ribbon fisheries cross Forest Service lands, and native trout, in many cases, find their last and best remaining habitats on the green lands.

Through the lens of these combined experiences, I have gained a broad perspective on both the benefits and challenges of managing our national forests. The most important point I'll make today: The guiding

principle of the federal government's action regarding wildfire—and all other management activities—should be to ensure the long-term ecological health of the lands and waters upon which we all depend.

The challenge as defined by Gifford Pinchot is to manage for the "greatest good for the greatest number for the longest time." Many forget that the Organic Act of the Forest Service made water and watershed protection a primary objective for the Forest Service. The critical role forests play in the carbon cycle and moderating climate change is perhaps the most recent value we must take seriously. The severe drought in California and parts of the West and other extreme weather patterns are reminders that maintaining and protecting forests and their sound management is of the utmost importance to our own health and well-being.

Our national forests remain a valuable source of clean water for communities across the country; these forests provide habitat for fish and wildlife, recreational opportunities for hunters, anglers and outdoor enthusiasts and, when properly managed, a sustainable source of jobs and revenue for local communities.

Fire-Borrowing: The Challenge of Wildfires on the ground and in fire budgeting and forest management policies.

It is important to put the fire borrowing problem in context. From World War II through the 1980's, the Forest Service put a premium on timber harvest. The all-time high was reached in the late 1980's with harvests approaching 12 billion board feet per year. Through that same period, wildfires were extinguished as soon as they were discovered. The general rule was all fires should be out by 10am. The combination of past timber management practices and fire suppression have put our forests out-of-whack. Our solutions should seek to bring them back into balance. The guiding principle of my testimony is the need to manage for the long-term health and sustainable productivity of the land.

Wildfire budgeting is based on a 10-year rolling average – relying on costs from the previous 10-year period to predict expenses in the following year. However, this approach to budgeting leaves the agencies underfunded more and more frequently as the severity and extent of these fires increases out-pace from the previous 10-year averages.

Wildfires are becoming increasingly larger and more severe. Contributing factors include changing climate conditions - hotter, drier summers, variations and unpredictability in precipitation, longer more severe droughts; increasing development in fire-prone areas, and a legacy of past timber management and fire suppression policies that, despite good intentions, have left many of our forested acres vulnerable to wildfires.

Changing climate conditions have led to fires seasons that are now nearly 80 days longer on average than in 1970. The six worst fire seasons since 1960 have all occurred since 2000. One to two percent of fires consume 30 percent or more of annual costs.

The rising frequency and magnitude of wildfires has placed growing and unsustainable strain on agencies as they are forced to re-allocate ever-increasing percentages of their budget to fire response. As the cost of fighting fires increase, so does "fire borrowing" –when the Forest Service runs out of money to fight wildfires and must take funds out of other non-fire accounts, such as restoration programs or other operational budget items. Funding for non-fire programs has not kept pace with the increased cost of fighting fire.

Over the last two decades, wildfire management costs (firefighting and other fire-related activities) more than tripled in its portion of the overall Forest Service budget – jumping from only one-sixth in 1995 to more than half in 2015. A recent report (August 2015) from the agency predicts that by 2025, the Service will spend two-thirds of its budget on wildfires. Along with this shift in spending, there has been a corresponding shift in staff – while fire-related staff increased 114 percent between 1998 and 2015, this same period of time saw a 39 percent reduction in all non-fire personnel.

This system of budget raiding to fight fires significantly disrupts the mission of the Forest Service and the very health of the forests under its jurisdiction. Ironically, the more money that is transferred or reallocated to fighting fires, the less money that is available for restoration activities that would help improve forest resiliency and minimizing the severity and impacts of fires.[1]

---

[1] Specific program reductions outlined in USFS August 4, 2015 report – including 95% reduction in Deferred Maintenance; 68% Reduction in Facilities; 46% reduction to Roads; 18% Reduction in Wildlife & Fisheries Habitat Management;

This approach to wildfire funding has real on the ground impacts. The depletion of non-fire programs to pay for the ever-increasing costs of fire has implications not only for the Forest Service's restoration work that would help prevent catastrophic fires, but also for the protection of watersheds and cultural resources, upkeep of programs and infrastructure that support thousands of recreation jobs and billions of dollars of economic growth in rural communities, and support for the range of multiple uses, benefits and ecosystem services, as well as research, technical assistance, and other programs that deliver value to the American public.[2]

A few examples of how on-the-ground project work has suffered because of fire-transfers:

- In Georgia, a recent road decommissioning project, adjacent to one of north Georgia's mountain trout streams, was put on hold indefinitely due to a shortfall in resources to combat fires in the west.

- In California, long-term restoration activities and projects on forests damaged by fire and third party negligence (including road repair and trail repair, recreation facility repair and watershed and stream restoration and habitat improvements) were deferred or cancelled.

- Nationally, over the last 10 years fire funding as a part of the Forest Service budget has grown, there has been a continuing reduction in technical staff in the agency with positions not being backfilled due to retirement or departure. So much of the regular budget is dedicated to fire related work that funding for road maintenance and fish passage projects have seen a dramatic drop off in recent years. Road and fish passage projects have dropped from approximately 250 a few years ago to 40 nationwide last year, and that number may be reduced by half next year. Watershed restoration projects were reduced by 35% last year alone.

- In Michigan National Forests: Inventory and monitoring of plants and wildlife to facilitate management of threatened, endangered, and sensitive species was deferred or canceled. Landscape classification surveys to coordinate and integrate resource inventories for land and resource production capability and response to management actions was canceled or deferred. Numerous partnerships and agreements were impacted, resulting in delayed erosion control work, delayed NEPA inventories, delayed or canceled wetlands restoration, road decommissioning, and wildlife habitat maintenance.

These are just a handful of examples of how fire-borrowing significantly disrupts the Forest Services' stewardship mission. This approach creates uncertainty for partners and planners, delays vital project

[2] USDA, The Rising Cost of Wildfire Operations: Effects on the Forest Service's Non-Fire Work, August 4, 2015, p.3.

work, and can even ultimately increase the risk and severity of catastrophic fires. This approach is not sustainable.

Recommendations

As discussed above, there are two primary policy-level problems that are contributing to the worsening fire borrowing crisis. 1) Budgeting issues related to mid-season, unplanned fire-borrowing; and 2) Investments and prioritization of on the ground Forest Management actions. These two problems are very much connected and solutions are needed for both.

New Budget Model is Needed to Eliminate Impacts from Fire-Borrowing

Congress must solve the problem of funding fire response without starving other agency land management priorities and programs. We applaud inclusion of $700 million in emergency funding as part of the Continuing Resolution (HJ Res. 61) to repay the Forest Service programs that were forced to transfer funds to pay for the FY 2015 fire season. However, the Emergency Supplemental Appropriation is a one-year fix. What is needed is a consistent budget planning process that is designed to support the necessary activities, without the annual uncertainty of reallocation and reprioritizations of funds to wildfire response.

We need to put the money back into the Forest Service budget, so that the agency can get to work on the projects needed to help ensure healthy, resilient forests in the years to come. A solution to fire funding would:

- allow access to disaster funding;
- eliminate the negative impacts of funding transfers; and
- address the increasing costs of suppression over time.

The Wildfire Disaster Funding Act (WDFA) S. 235 is the right solution to solve this problem.

Forest Management - Investments in Forest Service Stewardship Programs and Partnerships

In addition to solving the fire-funding problem, we must accelerate the pace of restoration to ensure that our forests are managed to improve fish and wildlife habitat, promote resiliency, and to support the many values and uses of our national forest system.

The recent Farm Bill created opportunities for this restoration, including a small exemption from NEPA analysis for certain projects, permanent stewardship contracting authority, and the expansion of good neighbor authority. Policies such as broad NEPA exemptions are difficult for us to support because the public process is vital to support sound public land decisions.

We can accelerate the pace of restoration without sacrificing environmental protections. The Forest Service has taken significant strides in recent years to promote restoration projects effectively and efficiently despite increasingly constrained budgets. For example, the Forest Service recently established new categorical exclusions to expedite the NEPA process for restoration work, demonstrating that we can move these projects forward without eliminating environmental laws or public participation.

We support the use of timber harvest to accelerate restoration goals, but such actions need to involve the public, be targeted, provide a net benefit to fish and wildlife habitat, and be done in collaboration with communities of place and interest. Collaboration and collaborative stewardship work. The Forest Jobs and Recreation Act introduced by Senator Tester is a good example of bringing conservation interests and timber interests together to protect wilderness quality lands; promote hazardous fuels treatments; and ensure more stability in timber management from certain forests in Montana. The Siuslaw National Forest in Oregon has a ten year record of restoration that provides jobs, salmon recovery, owl benefits, and significant economic opportunity.

Real restoration, however, will focus on larger topics than just thinning. Cutting trees alone will not restore our forests. Restoration must be approached by looking at how best to recover ecological processes that keep the land healthy. Closing or relocating roads; fixing culverts; removing unneeded small dams and fixing obsolete water diversions; ensuring adequate flows of water; and thinning are all part of an integrated forest restoration strategy. The temptation we should resist is to try and cut our way to healthy forests.

Fundamental to forest restoration is the fact that many forests are fire-adapted, and in fact *need fire* to remain healthy. Our general approach should be to allow fires to burn in remote areas so long as they do not pose risks to communities. The overwhelming majority of hazardous fuels reduction and fire suppression should be focused on urban-wildland interface areas, including educating landowners about steps they can take to make their homes fire-safe. Homeowners and local governments must bear more responsibility for the proliferation of homes in fire prone areas and help work to reduce the risk to homes and fire fighters. Such an approach would help to restore natural fire cycles in at least part of the forest, save tens of millions of dollars, and minimize risks to fire-fighter safety.

This is not to say that a let-it-burn strategy should prevail. The challenge is to put fire back on the land in a way that minimizes risks to people and communities while mimicking natural fire regimes to the extent practical.

Conclusion

Thank you again for this opportunity to provide testimony on this important issue. We appreciate the interest taken by the committee in exploring the causes and potential solutions to alleviate the frequency and severity of wildfires through improved forest management and to improve the approach to funding and planning for responsible actions when fires occur. We support S. 235, the Wildfire Disaster Funding Act of 2015 as a critical and necessary improvement to the existing fire budgeting process and urge the committee to advance this bill.

DOCUMENTS SUBMITTED FOR THE RECORD

NOVEMBER 5, 2015

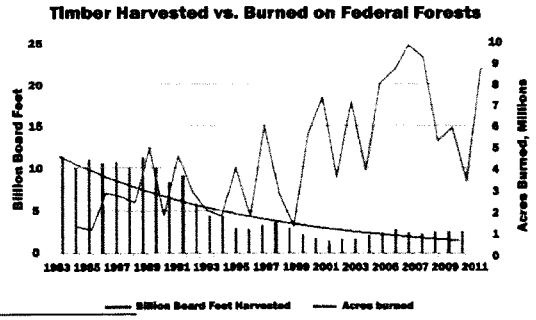
Testimony of Congressman Bruce Westerman (AR-04)
US Senate Committee on Agriculture, Nutrition and Forestry
November 5, 2015

Chairman Roberts and Ranking Member Stabenow, thank you for allowing me to submit written testimony for your hearing entitled "Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands." I appreciate the Committee taking the time to address this important issue that affects our treasured landscapes, environmental quality, and livelihoods. As a professional forester, I see that our forests are in decline and lack resiliency. President Theodore Roosevelt, who worked alongside a fellow Yale forester, Gifford Pinchot, to create the US Forest Service are the two I would credit as the fathers of our National Forest System. President Roosevelt once said, "The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased and not impaired in value."

2015 has been an especially bad year for wildfire with over 9.4 million acres burned as of October 30th—3 million acres more than the annual average over the past decade. However, the average number of fires over the past decade is almost 69,000, but only approximately 54,000 ignited this year.[1] Wildfires are burning hotter and faster, and getting out of control quicker. This is an ecological nightmare for air, water and soil quality, as well as an economic disaster for local communities. Make no mistake: this is a land management crisis that we have to address now before it gets even worse.

The practice of "fire-borrowing" plays a key role in the spread of wildfire. Land management agencies find themselves pulling money from timber harvesting and thinning programs in order to fund wildfire suppression. This hinders the ability of the US Forest Service and the Bureau of Land Management to conduct controlled burns, mechanical thinning, and other preventive measures to stop catastrophic wildfire.

Ending fire-borrowing alone will not bring an end to catastrophic wildfires. A singular focus on fire-borrowing treats the symptoms, but not the disease. Changes to forest management are imperative to solving this problem. Our forests are overgrown due to a lack of sound management practices being implemented. From the 1950s to the 1990s, an average of 10-12 billion board feet of timber was consistently harvested on national forest land, and the number of acres burned averaged 3.6 million. Today, 2-3 billion board feet of timber is harvested annually, with twice as many acres burning on average. [2] [3]



[1] National Interagency Fire Center (website)
[2] FY 1905-2014 National Summary Cut and Sold Data Graphs, USDA Forest Service
[3] 14 May 2015. US House Subcommittee on Federal Lands, Hearing Memo: *Oversight Hearing on Litigation and Increased Planning's Impact on Our Nation's Overgrown, Fire-Prone National Forests.* (Chart)

California Governor Jerry Brown proclaimed a state of emergency last week that waved many of the environmental reviews required under state law for the removal of dead trees due to widespread drought and bark beetle kills. According to Governor Brown, California forests are packed with 22 million dead trees. [4] In a letter to US Agriculture Secretary Tom Vilsack, Governor Brown wrote, "Tree mortality across California's forests is putting lives and critical infrastructure at risk, greatly increasing already dangerous wildfire conditions and exacerbating threats posed by falling trees."[5]

The House of Representatives acted on July 9, 2015 by passing H.R. 2647, the Resilient Federal Forests Act. This legislation takes a holistic approach to tackle wildfires. For example, it expedites the NEPA process for the removal of dead trees after a wildfire. It authorizes categorical exclusions for collaborative projects of less than 15,000 acres. H.R. 2647 would also empower states like California by allowing the Forest Service to take money that states put up to help with forest management projects. Finally, H.R. 2647 solves the problem of fire-borrowing in a fiscally responsible manner by treating wildfire as a natural disaster, just like a hurricane or tornado.

In short, H.R. 2647 does what Governor Brown began implementing last week. It is commonsense and bipartisan. It will help accomplish our shared goal of decreasing catastrophic wildfires. I encourage the Senate to take up this legislation in the near future.

Once again, I would like to thank the Chairman and Ranking Member for the privilege of submitting testimony for the record, and for your consideration of this vital issue. I hope that the Committee will use this opportunity to begin addressing the need to reform how we fund wildfire funding along with much needed forest management changes before the next fire season leaves millions more acres charred, lifeless, and impaired in value for the next generation.

---

[4] 30 October 2015. *Proclamation of a State of Emergency on Tree Mortality*, Executive Department, State of California.

[5] 30 October 2015. Letter from Gov. Brown to Sec. Vilsack

The Honorable Pat Roberts
Chairman
Senate Committee on Agriculture, Nutrition and Forestry
328A Senate Russell Building
Washington, DC 20510

The Honorable Debbie Stabenow
Ranking Member
Senate Committee on Agriculture, Nutrition and Forestry
328A Senate Russell Building
Washington, DC 20510

September 29 , 2015

Dear Chairman Roberts & Ranking Member Stabenow:

As entities responsible for delivering sustainable water supply and renewable hydropower for millions of citizens throughout the western U.S., we are writing in support of H.R. 2647, the Resilient Federal Forests Act of 2015 and ask that you quickly take Committee action on this legislation. It is critical that both forest management reforms and resolution of the "fire borrowing" issue are addressed in any legislation focused on improving the health and resiliency of our forests. Only by addressing both of these issues together can we ensure on-the-ground forest restoration activities can proceed at the pace and scale of the problem, and begin to improve the forest conditions that have led to the devastating and costly fire season this summer.

National Forest lands are the largest single source of water in the U.S. and in some regions of the west contribute nearly 50% of the overall water supply that supports our farms and cities. The unhealthy state of these forests, which in many cases were created specifically to protect water resources, has led to catastrophic wildfires that threaten the reliability, volume and quality of water for tens of millions of Americans, along with the wildlife, recreational, and multi-purpose value of these lands.

Severe drought and some of the most destructive wildfire seasons on record have highlighted the need to improve the process which would better allow the U.S. Forest Service (USFS) to accelerate restoration work in our National Forests - protecting critical headwaters and making forest lands more resilient against prolonged dry conditions, insect infestation and fire. Failure to take quick action will result in a continued increase in the frequency and intensity of

damaging wildfires that often impact the Nation's water resources for years or decades at considerable cost to stakeholders and U.S. taxpayers.

The Resilient Federal Forests Act of 2015 rightly prioritizes management activities that protect water resources and are undertaken through a collaborative process, and includes provisions that will prevent the increasing cost of fire suppression from continuing to rob the funds needed by the USFS forest management programs. We appreciate your consideration of this important issue and urge prompt passage of H.R. 2647.

Sincerely,

National Water Resources Association
Family Farm Alliance
Western Urban Water Coalition
Kansas Water Congress
North Dakota Water Users Association
Colorado Water Congress
Nebraska Water Resources Association
Association of California Water Agencies
Agribusiness & Water Council of Arizona
Utah Water Users Association
Salt River Project
Placer County Water Agency
Lake Tahoe Community Fire Prevention Partnership
Colorado River Water Conservation District
Central Colorado Water Conservancy District

Testimony of Phil Rigdon
President, Intertribal Timber Council
Submitted for the Record
Senate Committee on Agriculture
Hearing on "Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands"
November 5, 2015

I am Phil Rigdon, President of the Intertribal Timber Council (ITC) and Natural Resource Deputy Director for the Yakama Nation in south- central Washington State. On the behalf of the ITC and its more than 60 member Tribes, I appreciate the opportunity to discuss the serious impact of wildfire on tribes and how tribal forest management compares and contrasts to the U.S. Forest Service's management of its National Forests.

Management

Tribal forests are generally managed more efficiently, effectively, and innovatively than National Forests. This is principally due to a variety of elements and circumstances attributable to our tribal nations and communities.

Tribal forestry operates in a unique regime. At the time our reservations were established, the United States took title to our land and its resources into trust for our benefit, and that subjects our land and resources to federal law. At the same time, of course, our tribal governments retained and continue to exercise our inherent sovereign authority over our people and property. Today, the management of tribal trust forest resources generally operates successfully within this seemingly conflicted dual regime. The reasons for this are varied.

- Fundamentally, although tribal forestry is subject to both tribal law and federal law, the basic aim of both is the same: sustainability. While there are differences in degree and detail, we are at least heading the same direction.
- The federal trust responsibility can (but not always) temper and inform the application of federal law to tribal resources. The trust requires that the United States protect and manage our assets, including our forests, for the exclusive benefit of our tribes.
- The principal federal law governing the management of our forests, the National Indian Forest Resources Management Act (NIFRMA, PL 101-630, Title III), is the most modern, comprehensive and streamlined federal forest management law, providing flexibility and agility.
- Our forests are truly managed for multiple use. Our limited land base compels us to manage for multiple benefits, from providing revenue for our tribal government, to jobs for our tribal members, to habitat for our fish and game, to spiritual and cultural sustenance for our people. These varied activities must be accommodated. Unlike the National Forests, we cannot afford to have our forests

locked up in interminable disputes over such things as single-purpose dominant use and restrictive land classifications.

- Our forests are very immediate to our public. Our tribal members live in and around our forests, and rely upon them for a great variety of functions. They are very aware of and involved in how their forests are managed. Tribes also have broader, longer views of our forests, their uses and their purposes. We have lived with, on and from our forests for eons. We are bound to our forests and have evolved our traditional knowledge that guides our forest management. This deep historic and continuing involvement extends to the ceded forest lands beyond our reservation borders, often secured in treaty rights.
- Pursuant to Indian self-determination, tribes are taking over the direct management of our forests, strengthening the connection and responsiveness to our citizens and our governments. The Bureau of Indian Affairs and its Division of Forestry in their continuing role as trustee and overarching federal administrator are also becoming more attuned and responsive to tribal visions and goals for our forests.

Pursuant to both Tribal direction and federal law, Indian forests must be sustainably managed. Indian Tribes are direct partners with the Bureau of Indian Affairs in the active management of our forests. We operate modern, innovative and comprehensive natural resource programs premised on connectedness among the land, resources, and people. Our approach is holistic, striving to simultaneously sustain economic, ecological, and cultural values, the "triple bottom line."

Also significant is a unique forest management statute for Indian lands called the National Indian Forest Resources Management Act ("NIFRMA). Section 312 of NIFRMA requires that an independent scientific assessment of tribal forests and their management be conducted every ten years. IFMAT III is the third such assessment and report. It was completed in November 2013 and, also as required by the law, copies were submitted to the appropriate committees of the Congress in early 2014.

The ITC believes this periodic IFMAT assessment and report are so valuable that we recommend a similar process be applied to the National Forests.

Funding and Staffing

One of the key findings of the IFMAT III report is that tribal forestry programs are significantly underfunded and understaffed. On a per-acre basis, *tribes receive about one-third the funding for forest and wildfire management as the Forest Service*. Tribal forestry is also drastically understaffed, primarily as a result of underfunding, but also due to increasing retirements and a diminishing pool of trained and available personnel.

Confronted with these chronic shortages, IFMAT III found that tribes have to do more with less. We must be efficient, effective and inventive, and one result – and IFMAT

conclusion - is that tribes can serve as models for forest management. But just providing routine and on-going management of our forests under these constraints is a constant struggle. In terms of constant dollars, federal funding for our trust forests has been steadily declining over many years. Capacity and in-depth activities suffer. These shortfalls accumulate over time, and the consequences of chronic underfunding and understaffing are now being felt. The accumulated shortfalls now hinder the necessarily timely conduct of basic management functions like timber sales, and, more crucially, can cripple our ability to immediately respond to emergencies like the eruption of wildfire. The insufficiency of funding is such that the damaging consequences can be compounded. Over years, lack of forestry staff has prevented the sale of many tribes' planned annual harvest, depriving tribes of needed revenue and leaving valuable timber standing in the forest. When fire arrives and the unavailability of needed fire fighting resources allows the fire to greatly expand and consume those unsold trees left on the stump, the loss to the tribe is redoubled.

As these last few months have underscored, the United States' ability to protect and sustain the health and productivity of our forests in the future and the fulfilling of fiduciary trust obligations is very much in doubt. Now, in the wake of this summer's fires as tribes desperately try to salvage what remaining value we can from our decimated economic timber base, the federal government's willingness to meet its trust obligations is particularly in focus.

Wildfire and Recovery

Mr. Chairman, the IFMAT III report included an extensive review of wildland fire in Indian country, with dire warnings about the chronic insufficiency of federal support for addressing the growing specter of fires that could be devastating to tribal governments and communities. The IFMAT III report's findings and recommendations regarding fire provided the tribal aspect to the growing national concern about wildland fire overall.

In previous congressional hearings, the ITC has warned that Indian forests operate on a shoestring budget, and that the shoestring is about to break. Unfortunately, in the wake of this year's wildfires, I must report that this summer, that shoestring broke.

In this just concluded fire season, BIA reports there have been at least 3,127 wildfires on trust land, and at least five sizable timber reservations have experienced the largest wildfires they have ever recorded. A very preliminary estimate for this season is that at least 411,000 trust acres burned, most of it in an 8-week period in the Northwest.

Disparate funding and lack of access to suppression resources are major reasons why Tribes in the West suffered such large losses from wildfire. The intensity of earlier fires elsewhere in the West, often involving residences, drew most of the region's fire fighting resources, so that when fires started a little later on lands in and around our reservations, adequate fire fighting resources were not available. While the Tribes wanted to attack the fires aggressively, the lack of adequate resources for early suppression allowed the fires to get out of hand and greatly expand, resulting in unprecedented damage to our forests.

The Colville Reservation alone had nearly 200,000 commercial acres (1/3 of their commercial forest land base) seriously impacted by these fires. Collectively the Spokane, Yakama and Colville Tribes project mortality to their timber stands to total nearly 2 billion board feet. I want to emphasize that as more information is gathered, these amounts will change, and likely go up.

The policy of prioritizing fire suppression resources away from the federal trust protection of our forests to try to save private property resulted this year in immense destruction to our forests. We would urge that this policy be reevaluated. But more immediately, with the tribes already bearing the brunt of this policy, we ask that our federal trustee not cause us further harm by denying us the ability to salvage what value we can from our destroyed forests.

Faced with the long-term crippling of our tribes' economies, we must try to recover what value we can from our burned timber. As I have previously noted, the regular, on-going management functions for tribal forestry are already chronically underfunded and understaffed. Now we must try to harvest as much burned timber as we can in the next 18 months before its value completely disappears. This means trying to move up to three times our normal harvest level in this limited window. Based on very rough estimates, we are asking our federal trustee to immediately increase the FY 2016 BIA Forestry budget by at least $15 million to allow tribes to initiate recovery and salvage what we can from our forests.

In addition to the immediate attention our burned-over lands require for emergency stabilization and recovery, preliminary cost estimates for burned area replanting and riparian/habitat restoration for the next five years is estimated to be from $40 million to $60 million. It will take some time to evaluate the full scope of the damage to our forests and assess the costs of and implement restoration. But even with these restoration efforts, our forests, water, soil, fish, animals, plants, communities, and governmental revenues will suffer the consequences of this season's fires for many years to come. While private homes might be rebuilt in two or three years, it will take our forests decades to return.

Although this year's fire damage to our trust forests is extreme, Tribes are better able to quickly apply resources to recover value and undertake restoration to minimize damage to our forests. Let me walk you through what's happening right now. As trees are still smoking, our teams are already on the ground performing damage assessments, preparing environmental documentation and will soon begin salvage operations to reduce fuel loads, protect soils, and prepare the ground for reforestation. If our trustee steps up with the funding needed to salvage what we can from this disaster, we will have many of those dead trees harvested and off to local mills before the end of the year. We're racing against the clock – every day we'll lose timber value to decay and blue stain.

Compare that to our federal neighbors. It's not an exaggeration to estimate that the NEPA work on Forest Service salvage sales will take two years to prepare and complete appeals and litigation. Timber value will be lost, as will opportunities to give the new forest a head start in recovery. In turn, this impacts tribes who exercise off-reservation rights on

these federal lands for hunting, fishing, gathering of foods and medicines, and other activities.

Lessons

We believe that Tribes can demonstrate how actively managing the land can help improve the long-term management of federal forestlands, improve their response to disasters like wildfires and minimize potential for hazardous conditions that invite damage to arise. We recognize and understand that a holistic approach is essential to maintain healthy, working forests on the landscape, and with the Forest Service we are pursuing two specific initiatives to extend such holistic management and encourage broader stakeholder participation.

First, we are currently on the ground developing "Anchor Forest" pilot projects to explore opportunities for collaborative management across ownership boundaries. Using tribal expertise and ecological credentials, we're seeking to provide a framework for investment to preserve the management, workforce, harvesting, transportation, and processing infrastructure needed to sustain healthy forests on the landscape both for economic vitality and ecological health. Tribes seek to wisely manage the resources today to preserve the landscape for future generations.

Second, individual tribes and the Forest Service, working with the ITC, have initiated thirteen new forest health and stewardship projects on Forest Service land through the Tribal Forest Protection Act authority (PL 108-278).

Beyond these two initiatives, I offer below a few ideas based on tribal forest management experiences. I recognize these are very broad and, with particular regard to application to the National Forest System, are certainly more easily said than done. But perhaps they can simply suggest a direction to be pursued over the long term rather than a specific point seeking immediate attainment:

- Provide simpler, more flexible and responsive laws and policies for the National Forests. A greater number of ever more specific laws and regulations will only increase the snarl that already ties up the National Forests. The idea of comprehensive, simplifying reform might be explored.

- Consider IFMAT-like periodic independent evaluations of National Forests, perhaps on a regional basis, including findings and recommendations.

- Allow individual National Forests to better engage and reflect local interests and concerns. Current emphasis on increased collaboration within both the Forest Service and the National Cohesive Wildland Fire Management Strategy appears to be already heading this direction.

- Encourage National Forests to work with neighboring forest stakeholders to share and harmonize management across the landscape. This could include policies and concepts

such as Anchor Forests, Tribal Forest Protection Act projects, and Good Neighbor Authority projects.

- Re-dedicate the National Forests to active management for sustainable multiple use, seeking mechanisms that would promote cooperation, integration and compromise rather than pitting individual uses against one another.

- Seek to stabilize and equalize funding across the forest landscape for both management and fire, particularly among government entities.

About the Intertribal Timber Council

The ITC is a 39 year old association of forest owning tribes and Alaska Native organizations that collectively manage more than 90% of the 18.6 million acres of BIA trust timberland and woodland that provide thousands of jobs and significant economic activity in and around Indian Country. In addition, our forests store and filter the water and air, sustain habitats, and produce foods, medicines, fuel, and materials for shelter, transportation, and artistic expression. We invite you to come visit.

STATEMENT FOR THE SENATE COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY HEARING RECORD

SUBMISSION MADE ON BEHALF OF THE CALIFORNIA FOREST AND WATERSHED ALLIANCE (CAFWA)

November 5, 2015

Chairman Roberts, Ranking Member Stabenow and Committee Members, the California Forest and Watershed Alliance (CAFWA) is pleased to submit this statement for the record for the November 5, 2015 hearing entitled, "Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands." CAFWA is a unique alliance of disparate interests including organizations that represent water, environment, local government, timber, and agricultural interests all dedicated to finding a solution to California's ever-growing forest health and fire risk issues. The members of CAFWA, the Association of California Water Agencies, California Farm Bureau Federation, California Forestry Association, The Nature Conservancy California Chapter, and Rural County Representatives of California, are working together to seek new ways to promote proactive, science-based, and ecologically sound forest management practices that will reduce the risk of destructive megafires. Our goal is to protect our forests, our natural resources, and our local economies by accelerating the pace and scale of forest restoration.

Background: Accelerating forest restoration and hazardous fuels reduction is essential to securing multiple benefits from our National Forests. These benefits include wildlife habitat, clean water supplies, recreation, forest products, carbon sequestration, forest health, reduced burned acres in wildfires and reduced fire severity, and healthy rural communities and economies.

Inaction on forest health is contributing to catastrophic megafires. CAFWA encourages Congress and the U.S. Forest Service to quickly address the known budgetary and policy obstacles that are contributing to this crisis.

CAFWA believes that any policy or legislative reforms that promote improvements to and expansion of forest restoration activities should be ecologically sound, and advance research to improve the state of scientific knowledge to better direct future land management decisions.

Problem Statement: California forests, and other forests across the western United States, are at serious risk of large, high-severity wildfires that threaten lives, communities, water resources, wildlife habitat, and recreation. Although forest thinning and controlled burning are proven methods of reducing the risk of destructive megafires, the current pace and scale of forest management activities are inadequate given the scope of the problem. Our fire season is starting earlier and lasting longer with fires burning hotter than ever before. The growing cost of Forest Service fire suppression activities is negatively impacting the budget available to carry out critical restoration projects that protect forests and will reduce firefighting costs over the long term. Severe drought in western states is also exacerbating the decline of forests due to beetle bark infestations.

There is an urgent need to restore our forests to a more resilient condition to protect our water resources, communities, and ecological values.

2015 Wildfire and Budget Impacts: According to the California Department of Forestry and Fire Protection (CAL FIRE), almost 306,000 acres of private and state land and another 400,000 acres of federal lands have been affected by wildfires this year alone and the state estimates that $209 million will be spent, just in suppression costs. Similarly, at the national level, the U.S. Forest Service estimates that this year it will spend 52% of its entire budget on wildfires, with that amount expected to increase to 67% by 2025. Contrast that to 1995, when the Forest Service spent 16% of its budget on wildfire costs; such drastic increases in the percentage of their budget that is used for fighting fires cuts into non-fire programs such as restoration and land management, which, in turn, increases the likelihood of catastrophic wildfires the following year.

CAFWA Statement of Purpose: CAFWA believes healthy forests matter, not just to those living in and around those forests, but to all Californians who rely on clean water, clean air and recreational opportunities. The impacts of forest wildfires on our water, energy, environment and economy are felt by Californians throughout the state. It is time to take a serious look at current forest management policies, and to expand programs to improve forest health. The members of CAFWA are working together to seek new ways to promote proactive, science-based, and ecologically sound forest management practices that will reduce the risk of destructive megafires.

WHAT'S AT RISK?

Water Supply and Storage: Unhealthy forests and catastrophic wildfires affect the short and long term management and sustainability of water supplies. Wildfires in untreated areas cause burned areas to produce increased loads of sediment, ash and debris which cause reservoirs to fill up faster and reduce the life and storage capacity of reservoirs. Burned watersheds without trees and ground cover will result in snowpack melting more quickly. The resulting runoff will be less predictable, and less timely, increasing the difficulty of managing water supply throughout the west.

A recent study by The Nature Conservancy (TNC) analyzed the potential water yield benefits from ecologically-based forest management in the northern Sierra Nevada and concluded that, if conducted at a landscape scale, fuels reduction in Sierra forests can potentially increase water yield by up to 6 percent. Dr. Roger Bales (UC Merced) in his 11/29/2011 publication predicts that up to 16% could be increased in water yield. The TNC report also found that it makes economic sense for water suppliers and utilities to invest in ecologically based thinning. Increased water that comes from thinning small trees could have significant economic benefits for downstream hydropower and water users, potentially off-setting between one-third and the full cost of the thinning.

Water Quality: Post-fire flooding has short and long-term impacts throughout watersheds which can extend far beyond the area of the fire. Ash, sediment, nitrogen and phosphorus can severely impact the taste and purity of drinking water, and negatively impact fish and other aquatic species that require clear, oxygenated water. Increased sediment deposited behind reservoirs can impact the taste, clarity and odor of water as dissolved organics increase in the water, requiring elevated water treatment costs.

Ecosystem and Wildlife: Destructive megafires have numerous impacts on the ecosystem and wildlife. High severity fire can scorch soils, removing valuable organic carbon on the surface and in the soil profile, reducing its water holding capacity. When this occurs on slopes, the fire-sterilized soil is more likely to be carried down-slope, causing erosion and reversing hundreds to thousands of years of natural soil building processes. Wildlife habitat is also impacted by high severity fire as ecosystems shift from cool, canopy covered refugia to hot, exposed, and eroded barrens. Some wildlife can exploit these newly disturbed areas and brush lands, while others may need to migrate elsewhere to survive. Newly disturbed sites are also prone to invasion by non-native plant species that grow quickly and take advantage of recently released nutrients and bare, mineral soil. Additionally, some treeless patches are so severely sterilized that new sources of seeds do not exist and the area must be replanted, incurring greater costs and raising uncertainty about success in a continuing drought.

Rural Economies: The absence of forest management creates devastating economic hardship and danger for those living and working in California's rural communities. These megafires often result in millions of dollars worth of infrastructure damage and devastation to the landscape that require lengthy rehabilitation periods. Rural communities also rely on healthy forests for revenues generated from the multiple uses our National forests provide including, but not limited to, timber harvest, grazing, tourism, and recreation.

OPPORTUNITIES

Unfortunately, fuels reduction projects in overgrown forests continue to face numerous obstacles. Despite partnerships between stakeholders and federal, state and local governments, and science that clearly demonstrates the benefits of fuels reduction projects, the pace and scale of proactive forest management is not nearly keeping up with the increased size and severity of wildfires in our western forests. CAFWA believes there are opportunities to help accelerate forest restoration and is undertaking the following actions:

- Building a diverse, bipartisan, urban-rural coalition in California to advocate for increasing the pace and scale of ecologically-based active management in California's forests and watersheds.
- Communicating the importance of California's healthy forests by emphasizing the multiple values that they provide including, but not limited to, water resources.
- Pursuing increased funding and new funding sources for forest management from federal, state, and private sources.
- Advocating for policy and legislative reforms that will promote ecologically sound forest restoration.
- Advancing monitoring and research to improve the state of scientific knowledge to better direct future land management decisions.

CAFWA encourages Congress to pass federal legislation that addresses the following issues:

Promote Landscape-Scale Collaboration -- Congress should incentivize and reward landscape-scale collaboration with local governments and diverse stakeholders by expediting environmental review for collaboratively-based projects that address insect or disease infestation, reduction of hazardous fuels particularly near communities, forest health restoration, wildlife habitat improvement, or protection of municipal water sources.

Fix "Fire Borrowing" -- The structure of wildfire funding desperately needs to be changed to prevent so-called "fire borrowing" - or the shift of dedicated forest management funds at the U.S. Department of Interior and the U.S. Department of Agriculture, to fund wildfire suppression activities – *in addition to*, addressing the increasing costs of suppression over time, which continues to erode program budgets. Currently, the Wildfire Disaster Funding Act is the only proposal positioned to address the multiple complexities of fire budgeting. Resolution of this issue, whether through the Wildfire Disaster Funding Act or an alternative methodology, is critical to the constituencies CAFWA represents.

Expedite Forest Restoration -- Congress should consider providing additional direction and incentives to the Forest Service to undertake fuels reduction and forest management activities on a landscape scale, where supported by effective collaborations. This could include a combination of (1) financial incentives for landscape-scale forest management, possibly tied to a job-creation program to bolster rural economies and provide more certainty over multiple years, and (2) regulatory incentives. Regulatory incentives may include providing direction to the Forest Service to encourage management of the national forests on a landscape scale, including innovative approaches to complying with the National Environmental Policy Act (NEPA) that would meet the policy's goals while expediting forest management. This approach might include, for example, increased use of landscape-scale Environmental Impact Statements (EIS) that consider environmental impacts and alternatives at a whole-watershed scale while allowing the Forest Service to implement site-specific projects without additional extensive NEPA review, as long as projects are ecologically sound. This may also significantly decrease per-acre analysis costs and expedite project implementation.

Address Pace of Judicial Process -- CAFWA shares the concern that legal challenges can reduce the pace of forest management necessary to reduce wildfire risk and promote more resilient forest conditions, while ensuring agencies are held accountable and projects are ecologically sound. CAFWA recognizes there are several different approaches being debated on how best to address this concern. The goal should be to expedite collaborative, ecologically-based landscape-scale management. Congress should work on a solution that advances this goal.

Funding for Forest-Water Research and Demonstration Projects -- Congress should build upon the link between healthy forests, watersheds, and downstream water quality and quantity by funding landscape-scale research and demonstration projects. The goal of such research should be to document and quantify the extent to which landscape-scale forest management serves to safeguard water supply by reducing the risk of high-severity wildfires and resulting erosion and sedimentation, by increasing water yield, and in other respects.

CONCLUSIONS

Accelerating forest restoration and hazardous fuels reduction is essential to securing multiple benefits from our National Forests. These benefits include wildlife habitat, clean water supplies, recreation, forest products, carbon sequestration and healthy rural economies.

Inaction on forest health is contributing to catastrophic megafires. CAFWA encourages Congress and the U.S. Forest Service to quickly address the known budgetary and other obstacles that are contributing to this crisis.

If you would like to reach a member of CAFWA for further details on our position, please contact Erin Huston of the Farm Bureau at ehuston@cfbf.com, Dave Reynolds representing ACWA at dlreyns@sso.org, Thane Young representing RCRC at tyoung@vsadc.com, David Edelson at dedelson@tnc.org, or Steve Brink with CalForests at steveb@calforests.org.

FEDERAL FOREST
RESOURCE COALITION

600 New Hampshire Ave., NW
Washington, DC 20037

Written Testimony of the Federal Forest Resource Coalition
Before the Senate Agriculture, Nutrition, and Forestry Committee
November 5, 2015
Regarding
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands

The following statement is submitted on behalf of the Federal Forest Resource Coalition, a national non-profit organization representing purchasers of Federal timber, conservation groups, and county governments in 40 States. Collectively, our members employ over 390,000 people, and provide over $19 billion in payroll. Our members purchase, harvest, transport, and process National Forest and BLM timber into renewable wood, paper, and biomass energy products. Moreover, we live and work in close proximity to our National Forests. Our members value the National Forest System as a source of both economic and ecological values, both for their businesses, their families, and all Americans.

The Situation on the National Forests:
We are deeply concerned about the current conditions we are seeing throughout the National Forest System. These conditions frequently manifest themselves as large, and expensive, wildfires. These fires are larger, hotter, and more destructive than in the past, due to a combination of severely overstocked forests, prolonged drought, and climate change. The Administration acknowledged in 2012 that up to 82 million acres – over 40 percent of the National Forest System – are in need of restoration, primarily due to overstocked stands and altered fire regimes.

The poor conditions on our National Forests helped contribute to this year's record breaking 9.3 million acre fire season, and over $2.1 billion in suppression costs for the Forest Service. Over 40 percent of the wildfires in the lower 48 occurred on Forest Service lands, with California, Oregon, and Idaho contributing most of that total. 2015 marks the third year in a row in that large fires have burned uncontrollably through the National Forests in California, with the Rough Fire burning over 150,000 acres over the course of 8 weeks, almost exclusively on the Sierra and Sequoia National Forests. Likewise, Washington State saw a second year of large, destructive wildfires, particularly the Kettle Complex on the Colville National Forest.

It is critically important to realize that as catastrophic as the 2015 fire season was, the weather gave the Forest Service a significant break this year. Much of Arizona and New Mexico and portions of Colorado and Utah experienced significantly greater precipitation than normal, effectively ending the drought for most areas in those states, for the short-term at least. Had drought conditions persisted, the 2015 Fire Season would likely have been even worse, and this year's already record breaking acreage totals would have been even higher.

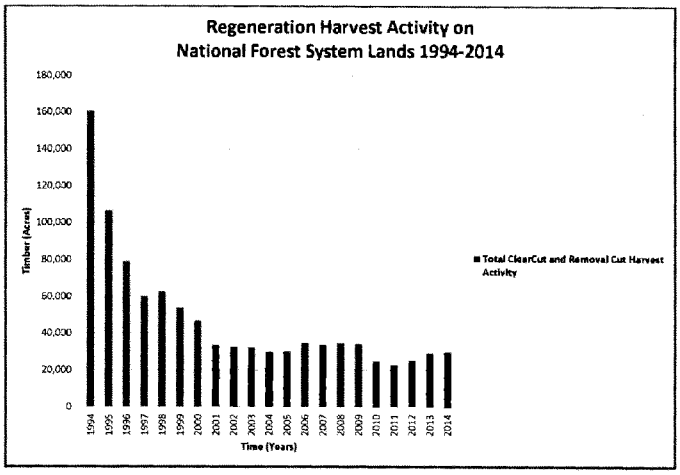
It is also important to note that the fire crisis on our Western Forests is not the only management problem facing the Forest Service. In the Eastern and Southern Regions, the Forest Service is woefully behind on the creation of critical early successional habitats through harvest.

Forest managers, wildlife managers, and others recognize that Early Successional Habitat, or young forests, play a unique and important role in forest ecosystems. Research has demonstrated that "the extent of early-successional forest across much of eastern North American is near historic lows, and continues to decline" (King and Schlossberg, 2014). The decline of these forest types limits the viability of numerous species, including game species such as the ruffed grouse, wild turkeys, and non-game species such as the Kirtland's Warbler and the Golden Winged Warbler.

Early Successional Habitat can be created through even-aged management; clear cuts, seed tree cuts, and heavy "shelterwood" harvest systems remove the majority of the dominant trees and allow sunlight to reach the forest floor. This type of management allows shade-intolerant species, such as many oaks, to regenerate, while allowing species that sprout from existing stumps and root systems (like birch, aspen, and some spruce) to regenerate as well. This is usually described as a "regeneration harvest" system, as distinct from a selection harvest or commercial thinning, which leaves the majority of the dominant, canopy trees in place. ESH can also be created by natural disturbances such as wind events, fires, and ice storms.

FFRC analyzed forest plan accomplishments for all Forests in the Forest Service Eastern and Southern Regions. For those with clearly defined ESH goals, monitoring reports show a pattern of under-achievement and an overall decline of ESH. Most annual and decadal accomplishments ranged from 0 to 56 percent of ESH goals, with only a few forests that reaching between 70 and 80 percent of at least one annual goal. In some cases, Forests that achieved or approximated their ESH goals did so because natural disasters created the habitat, or the unit acquired land which had recently been harvested. Of the forests with clearly defined goals, only the Francis Marion claims to have met or exceeded its ESH goals.

The overall trend in the two Eastern Regions of the Forest Service mirrors the larger trends in the entire National Forest System. The following chart of regeneration harvests was developed using data from the Harvest History of the National Forest System, 1984 to 2014:



The huge decline from 1994 to 2000, from over 150,000 acres of regeneration harvest annually to about 50,000 acres annually, came after a period (1984 to 1993) when regeneration harvest totaled well over 300,000 acres annually. For the last 10 years, the Forest Service has conducted even-aged management on an average of just 32,805 acres annually, or 0.017 percent of the national Forest System.

Only 11 of the 29 NFS units in the two regions surveyed had both clearly stated ESH goals and clearly stated ESH accomplishments reported; or at least goals that could be easily converted into annualized averages. On an annual basis, for these forests, the results are extremely negative:

NFS Unit:	ESH Annual Goal	Avg. Annual Accomp.	Shortfall:
Allegheny	4,260	1,705	2,555
Chattahoochee-Oconee	1,400	65	1,355
Chequamegon-Nicolet	3,980	2,221	1,759
Chippewa	4,034	2,214	1,820
Daniel Boone	1,553	84	1,469
GW-Jefferson	2,400	723	1,677

Huron-Manistee	8,868	2,905	5,963
Kisatchie	2,000	549	1,451
Mark Twain	11,270	2,584	8,686
Ouachita	5,500	900	4,600
Ottawa	1,700	828	872
White Mountain	940	350	590
	47,905	15,128	32,797

Just achieving the forest plan goals on these eleven NFS units would increase the amount of even age harvesting on the NFS by 63 percent over the 10-year average.

Again, meeting these goals would help meet critical forest plan objectives for habitat types that are needed by a wide variety of game and non-game species. Yet these habitat types are declining on many forests. Some examples follow:

Arkansas: Recent efforts to create and maintain ESH on these two forests appear to be flagging. The Ouachita NF has a goal of creating 5,500 acres of ESH annually; in 2013, they only created 900 acres. The Forest has been achieving between 16 and 80 percent of its goals, with the trend pointed downward. The Ozark-St. Francis sets a goal of between 3.8% and 6.8% in ESH, but has only been able to maintain 1.3%. Overall, for the most recent year with available data, the two NFS units are achieving only between 25 and 50 percent of their ESH goals.

Georgia: The Chattahoochee-Oconee National Forest sets three different ESH goals; for high elevation forests, there is a decade goal of 3,000 acres. For riparian areas, there is a 1 to 2 percent objectives. To achieve "general structure diversity", there is a goal of 11,400 acres in the first decade. The accomplishments are paltry: For high elevation forests, they have achieved 10% (300 acres), they've managed 23 acres in riparian areas ("short of goal"), and just 1.75% (200 acres) have been created for "general structural diversity."

Kentucky: The Forest Plan sets no particular ESH goals. The monitoring reports state that between 2.5 and 3 percent of the Forest is in ESH, and the Forest has conducted even-aged management on just 789 acres per year on average, or 0.11% of the forest annually.

Michigan: The three national forests in Michigan have very different approaches to ESH. The Hiawatha appears to have no specific goals for ESH. The Huron Manistee sets a goal of 8,800 acres of ESH creation by even aged management annually; it has been accomplishing 2,905 acres a year, about one-third of the goal. The monitoring reports note that ESH creation has slowed since 2006. On the Ottawa, the Forest has only accomplished 49% of their aspen/paper birch regeneration goals.

Minnesota: The Chippewa sets two goals for ESH; 5 to 12 percent for "upland ecosystems", and 1 to 12 percent for "lowland ecosystems." The monitoring reports note that accomplishments are below the goals, even though a large windstorm created a large swath

of ESH. The Superior National Forest sets ESH goals for 6 different forest types; monitoring reports indicate they are "receding" from all those objectives.

Mississippi: The five NFS units in Mississippi have a reputation for effective management; for instance, the DeSoto NF led a recovery effort after Hurricane Katrina in 2005 that recovered over 400 MBF of timber and salvaged timber on about 80% of the affected acres. However, their forest plan notes that early successional habitat declined by 50% between 2002 and 2012.

North Carolina: The plan monitoring reports acknowledge that management is "low" compared to 2001, but stable.

Pennsylvania: The forest plan for the Allegheny NF calls for maintaining 8 to 10 percent of the forest with ESH. They've managed to maintain ESH on just 3.4 percent. This has led to a 50 percent decline in ESH acreage on the forest in just seven years. The forest plan calls for 4,260 acres of regeneration harvest annually, the forest has been achieving just 1,705 acres annually.

Vermont: The Green Mountain sets a goal of 1,750 acres of regeneration harvest annually. The most recent year showed they conducted regeneration harvest on just 152 acres, or less than 9 percent of the goal.

The Forest Health situation is particularly dire in the central Rockies. The National Forests in the Rocky Mountains have been suffering from extensive mortality due to bark beetles, which have killed trees on over 50 million acres of pine and spruce forests. These outbreaks, and the Forest Service's slow response to them, threaten the future of our forests and the viability of the wood products industry in the Mountain West.

The single most significant reason for the mountain pine beetle epidemic is the density or "stocking levels" of the forest. Reducing the risk of mountain pine beetle outbreaks in ponderosa pine forests isn't rocket science. Dr. John Schmid, arguably the world's foremost expert on mountain pine beetle has maintained a series of research plots in the Black Hills for years. From his research, we know that the duration and intensity of mountain pine beetle infestations are primarily a function of the number and size of trees. The higher the density of trees, the higher the risk of mountain pine beetles. Conversely, thinned stands have a significantly lower risk of mountain pine beetles. While mountain pine beetle mortality won't be eliminated, mortality can be limited to a relatively low level, for example single trees or pairs of trees.

National Forests throughout the Mountain West have experienced similar, or worse, catastrophic insect epidemics. These catastrophes have caused great harm to forests, communities, private landowners, residents, and family-owned businesses. The expansion of bark beetles to lodgepole pine forests and higher elevation spruce forests demonstrates that we must aggressively manage our forest to ensure that healthy, vigorous forests can withstand the impacts of drought, fires, and native insects. The severe damage currently

taking place shows that at the moment, our forests are not healthy enough to withstand these stresses.

Persistent drought in California, coupled with overly dense forest stands on the National Forests there, has led to unprecedented tree mortality. The mortality situation in California led to Gov. Jerry Brown (D) issuing a "Proclamation of a State of Emergency," finding, among other things that the fire danger creates "conditions of extreme peril to the safety of persons and property within the State of California." Gov. Brown just last week asked Secretary Vilsack to take further actions to address these emergency conditions, saying "a crisis of this magnitude demands action on all fronts."

The Forest Reserves were created in the late 1800s in response to public outcry about the destruction of forests, and the reduction of timberlands to barren wastes subject to flood and fire. Today, there's also a public outcry about the destruction of our forests and the risk of fires and floods, only now the problem is the failure of federal forest policies.

Historically, the Forest Service has demonstrated the ability to respond aggressively to mountain pine beetle outbreaks. For example, in the early 1990s, the Forest Service moved quickly and aggressively in response to an outbreak on the Black Hills near Bear Mountain, and sold two timber sales to salvage bug-infested trees, before the infestation had a chance to grow. In contrast, one of the projects that the Black Hills NF is currently analyzing is the Vestal project, which they have given a high priority due to its proximity to Custer and the high occurrence of mountain pine beetles. The Forest Service started the analysis in May, using HFRA authorities, but they don't expect to finish the analysis and make a decision until May 2012. They finally began selling timber sales in the late summer of 2012. That means two flights of beetles before there are chainsaws and skidders in the woods.

The Forest Service routinely moves more quickly to recover downed timber and begin restoring the forests – particularly in other parts of the country. For instance, the Forest Service did much better following Hurricane Katrina. The hurricane hit Mississippi on August 29, 2005. By December 5, 2005, the Forest Service had completed their analysis and signed a Decision Notice. On December 6, 2005, they sold the first salvage sale, ultimately selling 58 timber sales and salvaging nearly 300 million board feet of downed timber. We see forests in other regions that usually address urgent salvage operations more quickly than we are able to do in the Western U.S. We've even seen forests that have model NEPA documents ready for the types of disturbances they typically encounter.

However, in the Western United States, whether the harmful agent is insect infestation or large fires (or some combination thereof), the last several years show us that it takes too long (frequently at least a year) to complete needed NEPA surveys and analysis before proposing large forest recovery and salvage operations. By the time the Forest Service offers projects for bid, wood quality has deteriorated significantly, preventing purchasers from bidding on the Forest Service timber.

The extent of the problem is not in doubt. The Government Accountability Office recognized the urgency of the need to reduce hazardous fuels in 1991. The Forest Service

acknowledges that over 82 million acres of their lands are a high priority for management and that "one time treatment of all high fire risk areas would not fully address the fuels problem, as landscapes continue to change over time and fuels would build up on many lands currently in historic condition, without periodic maintenance treatments." The Western Governors Association has adopted numerous resolutions acknowledging the extent and severity of the problem.

Current authorities do not allow the Forest Service to plan and implement needed management projects in a timely fashion. Badly needed projects to thin hazardous fuels can take years to plan, at which point groups opposed to management file lawsuits that cause further delays. Forests are woefully behind on meeting forest plan objectives, particularly those associated with young forests. At best, it takes the Forest Service at least a year to plan and begin implementing salvage projects in some regions.

Addressing both Symptoms – And Causes:
The underlying causes of the wildfire problem in much of the Western U.S. are clear, as noted above; severely overstocked stands and a lack of active management have left forests vulnerable to larger and more severe insect outbreaks, and a warming and drying climate makes fire starts harder to control. Forests adapted to low-intensity fires are experiencing instead larger, severe fires that damage soils, harm watersheds, and destroy wildlife habitat, while leaving the Forest Service to struggle through complex analytic requirements before embarking in restoration activities on the burned lands.

The symptom of this problem is the hugely expensive fire suppression bill the Forest Service faces annually, as well as the antiquated system put in place to pay it. Currently, the Forest Service requests – and Congress generally funds – fire suppression funding in line with the 10-year average. When those funds run out, the annual spending bills have contained language that allows the Chief to redirect other funds to cover suppression costs. Most often, these funds come directly from trust funds that Federal timber purchasers pay into when they buy Forest Service timber sales, including the Knutson-Vandenberg Fund, the Salvage Sale Fund, and others. In Fiscal Year 2015, $700 million was transferred, mostly from these funds but also from such other programs as Research and State & Private Forestry.

The annual transfer of funds, and the effort to hold funds in reserve so that they are available for transfer, significantly disrupt Forest Service operations and limit their ability to expand management on the ground. FFRC has long supported legislative efforts to provide access to emergency funding and obviate the need for "fire borrowing." Several proposals – including the bi-partisan Wildfire Disaster Funding Act (S. 235), the FY 2016 Interior, Environment, and Related Agencies Appropriations Bill (S. 1645) – have been introduced in the Senate. However, only one bill deals with both the symptom – emergency fire borrowing – and the underlying cause; overstocked forests and the analytic gridlock that prevents the Forest Service from effectively treating them.

HR 2647, the Resilient Federal Forests Act, passed the House of Representatives on July 9th with a strong bi-partisan vote, and now sits in this committee.

HR 2647's uses Categorical Exclusions (CE's) under the National Environmental Policy Act to allow routine, collaborative projects with known effects to be more quickly prepared, analyzed, and implemented. It will also allow needed forest recovery projects to proceed more quickly, addressing a dire need created by this summer's extreme wildfire season.

The Forest Service has long experience with management techniques to reduce forest pests, thin hazardous fuels, create and maintain habitat for species, recover damaged timber and protect water quality. These projects mitigate risk and help create early successional forest habitat which is good for wildlife. These projects are routine, recurring activities with known effects, and therefor should qualify for exclusions from repeated, extensive analysis.

HR 2647 addresses both the excessive analysis requirements currently imposed on even modest, collaboratively developed forest management projects, as well as the dysfunctional system of funding suppression costs out of forest management program accounts.

Provisions in the bill limit the acreage of Categorical Exclusions, and prohibit their use in sensitive areas. The legislation provides access to the disaster relief fund for wildfire suppression expenses in excess of the 10-year average. Rather than mandate specific treatment levels, timber outputs, or revenue targets, the legislation provides tools the Forest Service can use right away to help get needed management projects implemented on the ground more quickly.

Critically, the legislation also creates badly needed new funding mechanisms to allow the Forest Service to extend management to additional acres. By allowing the use of retained receipts under Stewardship Contracts to defray costs associated with NEPA analysis, the Resilient Federal Forests Act helps address one of the chief obstacles to expanding collaboratively developed management projects.

The legislation also capitalizes on recent efforts by many states to financially support forest management on the National Forest System. We are aware that several states, including at least New Mexico, Colorado, South Dakota, Montana, and Oregon have provided significant financial support to the Forest Service to help develop and implement needed forest management projects. HR 2647 creates a formal structure – a State Supported Fund – to allow the Forest Service to accept these funds and allows receipts from any projects to be plowed back into the fund.

The Act also discourages frivolous litigation by requiring activist groups to post a bond to cover the Government's costs before filing a suit against a collaboratively developed forest management project, and limits payments to plaintiffs opposing needed management projects. FFRC would strongly support including provisions which allow the use of arbitration as an alternative dispute resolution mechanism on some Forest Service projects.

The legislation enjoys broad support from over 210 groups, including forest industry, county and tribal governments, agricultural interests including the National Cattlemen's Beef Association and the American Farm Bureau Federation, and sportsmen's groups such as the Ruffed Grouse Society, Whitetails Unlimited, and the Rocky Mountain Elk Foundation.

Conclusions:

We would be remiss if we did not acknowledge the leadership provided by this committee in the 2014 Farm Bill, which, among other things provided new authorities to combat insect and disease infestations, extended Good Neighbor Authority to the entire nation, permanently reauthorized Stewardship Contracting, and provided new authority to reduce the need for time-consuming, and unnecessary timber marking on Forest Service sales. We have seen the Forest Service move – cautiously – to implement these new authorities.

The Forest Service's cautious approach should assure this committee that new authorities will not be abused. However, the inability to expand needed mechanical treatments, implement forest plan objectives, and effectively conduct salvage and recovery operations should equally convince this committee that new reforms are necessary.

This Committee has heard from multiple stakeholders concerned about the safety of their communities, their ability to access forest lands to hunt and fish, the sustainability of their economies, and the protection of their drinking water supplies.

The Forest Service is attempting to address many of these concerns by accelerating the pace and scale of forest restoration of our National Forests, and by advocating strongly for needed reforms to current fire funding mechanisms. We applaud those efforts and concur with the need to reform fire funding. However, additional authorities are needed. We believe the authorities provided in the Resilient Federal Forests Act are a very positive step in this direction.

Thank you for the opportunity to share these thoughts on this important topic.

The Federal Forest Resource Coalition is a 501(c)(6) non-profit representing purchasers of Federal timber and biomass in 32 States. Our members harvest, transport, and process timber into wood products, pulp and paper, and biomass, and represent local governments, sportsmen's groups, and others who support better management of our national forests. Collectively, our members represent over 390,000 employees, and over $19 billion in payroll.

September 24, 2015

The Honorable Pat Roberts
Chairman, Senate Committee on Agriculture, Nutrition, and Forestry
U.S. Senate
109 Hart Senate Office Building
Washington, DC 20515

The Honorable Debbie Stabenow
Ranking Member, Senate Committee on Agriculture, Nutrition, and Forestry
U.S. Senate
731 Hart Senate Office Building
Washington, DC 20515

Dear Chairman Roberts and Ranking Member Stabenow,

Our organizations are writing to you today on behalf of our millions of members of hunters, sportsmen, and other conservationists to express our strong support for H.R. 2647, the Resilient Federal Forests Act of 2015. We respectfully urge you to take Committee action on H.R. 2647 to improve the health of our forests and reduce costly wildfires. Our nation's federal lands play a vital role in maintaining healthy forests that are resilient to threats at a landscape level. The bill will help ensure that timber harvest and the creation of young forest habitat for wildlife remains viable on both federal and non-federal lands. In addition it helps fix the fire-borrowing problem that our country faces when fighting wildfires. H.R. 2647 passed the House on July 9th with bipartisan support and we urge you to move this or a similar effort to help fix the environmental threats of catastrophic wildfires.

All forest management plans are conducted with public input, and undergo NEPA analysis. The bill's use of the Categorical Exclusion under the National Environmental Policy Act will allow routine projects with known effects to be implemented more efficiently and cost-effectively to achieve the forest's desired future condition, as outlined in the forest management plan. Certain forest management treatments previously analyzed under NEPA in order to deal with issues like pests and disease, hazardous fuels, critical habitats for threatened or endangered species, salvage facilitation, and water quality do not need re-analysis on each similar project. These projects are routine, reoccurring activities with known effects, already fully analyzed and therefore qualify for categorical exclusions from repeated analysis. The acreage size limits defining these projects and the fact that treatments must be consistent with the approved forest plan should allay any concerns about the potential for overuse.

We also support the bill's provisions expediting large scale restoration after catastrophic wildfires. We likewise support the prohibition on restraining orders and preliminary injunctions. It is imperative that we work to restore wildfire-impacted lands for the ecological health of the immediate area and surrounding landscape, protection of the watershed, and economic vitality of the local communities.

Third, we generally support changing the way timber revenues are handled through Stewardship Contracting Projects so as to provide payments to counties. We believe this change will remove one impediment to using Stewardship Contracting and help garner and/or maintain support for the program. We do not support applying the same county payment treatment to stewardship agreements because they require a partner match.

We also support the concept of allowing use of Collaborative Forest Landscape Restoration and Stewardship Revenues for planning. However, we suggest that you explore whether the current threshold is the correct number or whether it should be smaller. An infusion of federal dollars for planning, if not closely monitored, could provide an avenue for U.S. Forest Service staff to not fully utilize product value (i.e., timber receipts) and partner match dollars for on-the-ground service work.

We strongly support the efforts to limit litigation on projects by requiring those challenging the U.S. Forest Service, in court, to post bond to cover the government's legal expenses. We believe this will

dissuade groups from litigating only for the sake of delaying action, especially given the new incentives for collaboration that are included in this bill. We are pleased that the House tackled this complex and sensitive issue.

Finally, the House-passed bill provides a resolution to the wildfire borrowing process by allowing FEMA to transfer funds to the U.S. Forest Service and Bureau of Land Management when other suppression funding has been exhausted. Fixing this problem is crucial because good proactive management must be coupled with a solution to the way fire-fighting is currently budgeted in order to find a long-term solution. Some Senators have expressed support for a different approach to the fire borrowing issue. We welcome any approach that remedies the problem and can gain consensus in the Senate.

We urge your Committee to pass a bipartisan forestry reform bill and address the fire borrowing issue. The wildfire issue cannot be resolved until our Federal forests are more actively managed. H.R. 2647 is a balanced approach that can be quickly implemented without lengthy new regulations and delay. We respectfully urge your Committee to take up forest reform and wildfire legislation in 2015. Thank you for your continued leadership.

Sincerely,

Archery Trade Association
Association of Fish and Wildlife Agencies
Bear Trust International
Boone and Crockett Club
Camp Fire Club of America
Catch-A-Dream Foundation
Congressional Sportsmen's Foundation
Council to Advance Hunting and the Shooting Sports
Dallas Safari Club
Houston Safari Club
Masters of Foxhounds Association
Mule Deer Foundation
National Association of Forest Service Retirees
National Bobwhite Conservation Initiative
National Rifle Association
National Shooting Sports Foundation
National Trappers Association
National Wild Turkey Federation
North American Grouse Partnership
Orion: The Hunter's Institute
Pope and Young Club
Professional Outfitters and Guides of America
Quality Deer Management Association
Rocky Mountain Elk Foundation
Ruffed Grouse Society
Safari Club International
Shikar Safari Club
Texas Wildlife Association
Tread Lightly!
Wildlife Forever
Wildlife Management Institute
Wildlife Mississippi
Wild Sheep Foundation
Whitetails Unlimited

September 15, 2015

Dear Senator:

Our organizations write to urge you to take quick action on wild fire funding reform and reform of federal forest management this fall. As you are aware, we are enduring a record breaking fire season, with more than 8 million acres of land – the vast majority of it Federal public land – burned so far this year. Many Senators from the impacted States have committed to addressing the current system for funding wildfire suppression. We applaud this effort – but we strongly urge you to include forest management reform in any legislation intended to stop fire borrowing.

Our national federal forests are facing serious threats from fires, insects, and diseases due to lack of active forest management. The poor health of our federal forests also threatens wildlife habitat, watersheds, and neighboring non-Federal lands, as well as the vitality of rural, forested communities across the country. House passed legislation, HR 2647, contains provisions intended to both address the disruption caused by fire borrowing and expedite needed forest management to improve the health and vitality of our federal forests.

HR 2647's use of Categorical Exclusions (CE's) under the National Environmental Policy Act will allow routine, collaborative projects with known effects to be more quickly prepared, analyzed, and implemented. It will also allow needed forest recovery projects to proceed more quickly, addressing a dire need created by this summer's extreme wildfire season. The Forest Service has long experience with management techniques to reduce forest pests, thin hazardous fuels, create and maintain habitat for species, recover damaged timber and protect water quality. These projects mitigate risk and help create early successional forest habitat which is good for wildlife. These projects are routine, recurring activities with known effects, and therefor should qualify for exclusions from repeated, extensive analysis.

HR 2647 addresses both the excessive analysis requirements currently imposed on even modest, collaboratively developed forest management projects, as well as the dysfunctional system of funding suppression costs out of forest management program accounts. Provisions in the bill limit the acreage of Categorical Exclusions, and prohibits their use in sensitive areas. The legislation provides access to the disaster relief fund for wildfire suppression expenses in excess of the 10-year average.

Clearly, Congress understands that forest health conditions on over 65 million acres of our national forest system are unacceptable. Congressional leaders also understand that the wildfire suppression funding mechanisms developed in the past are no longer adequate to address the conditions we are experiencing. We urge the Senate to take up and pass legislation that addresses both the forest management crisis and the fire funding crisis. Anything less is a half measure.

We stand ready to work with the Senate to advance responsible solutions to these serious national problems.

Alabama Forestry Association
American Farm Bureau Federation
American Forest Resource Council
Arkansas Timber Producers Association
Allegheny Hardwood Utilization Group
American Forest & Paper Association
American Loggers Council
Arkansas Forestry Association

Associated California Loggers
Associated Oregon Loggers
Black Hills Forest Resource Association
Carolina Loggers Association
Douglas Timber Operators
Forest Landowners Association
Hardwood Federation
Intermountain Forest Association
Louisiana Forestry Association
Michigan Forest Products Council
Minnesota Timber Producers Association
Missouri Forest Products Association
Montana Logging Association
National Alliance of Forest Owners
Nat'l. Lumber and Building Material Dealers Assoc.
National Wood Flooring Association
New Hampshire Timberland Owners Association
Pennsylvania Forest Products Association
Southeastern Lumber Manufacturers Association
Sustainable Forest Action Coalition (California)
Treated Wood Council
Washington Contract Loggers Association, Inc.
Association of Consulting Foresters
California Forestry Association
Colorado Timber Industry Association
Federal Forest Resource Coalition
Forest Resources Association
Hawai'i Forest Industry Association
Kentucky Forest Industries Association
Louisiana Logging Council
Minnesota Forest Industries
Mississippi Forestry Association
Montana Wood Products Association
Nat'l Wooden Pallet & Container Assoc.
Ohio Forestry Association
New Mexico Forest Industry Assoc.
South Carolina Timber Producers Assoc.
Texas Forestry Association
Tillamook County, Oregon
Virginia Forestry Association
West Virginia Loggers Council
Western Wood Preservers Institute

NATIONAL ASSOCIATION of COUNTIES NACo

September 18, 2015

The Honorable Pat Roberts
Chairman
Committee on Agriculture, Nutrition and Forestry
United States Senate
Washington, D.C. 20510

The Honorable Debbie Stabenow
Ranking Member
Committee on Agriculture, Nutrition and Forestry
United States Senate
Washington, D.C. 20510

Dear Chairman Roberts and Ranking Member Stabenow:

On behalf of the National Association of Counties (NACo), the only national organization that represents the 3,069 counties across the United States, I am writing to express support for quick action in the U.S. Senate to reform federal forest management practices and address the wild fire funding crisis, like what was included in the House passed legislation, the Resilient Federal Forests Act of 2015 (H.R. 2647).

This year's record breaking fire season has already consumed more than eight million acres of land, most of which is federal public land, and continues to threaten counties across the United States. While we applaud efforts to address funding for wildfire suppression, we urge Congress to move comprehensive legislation that addresses both fire borrowing and federal forest management reform.

The health of our federal forests has a direct impact on the public health, safety and economic wellbeing of counties across the United States. Not only do unhealthy forests increase community wildfire risk, they can also negatively impact community access to clean water and air, threaten wildlife habitats and reduce community opportunities for forest related tourism and jobs. H.R. 2647 will improve the health and wellbeing of forest lands and forest communities by promoting collaboration and streamlining regulations for forest health projects, protecting communities through wildfire risk reduction and improving flexibility and fairness in forest revenue sharing.

Promoting Collaboration and Streamlining Regulations for Forest Health Projects

Counties believe that the active management of federal lands and forests must be done in a sustainable manner to ensure the health of our federal lands for generations to come. One way to help ensure a balanced approach to address natural resource management challenges is by promoting locally driven collaborative processes that promote consensus driven decision making. Counties across the United States have engaged in collaborative efforts to address their natural resources challenges. By bringing together a broad cross section of local stakeholders into collaborative processes, counties, industry, outdoorsmen, conservationists and federal and state land managers have built consensus on some of the most complex natural resource management challenges.

By authorizing limited and reasonable categorical exclusions for projects that improve forest health and have been developed through consensus based collaborative processes, H.R. 2647 builds upon these successes and provides additional tools to help ensure that collaborative efforts continue to work, accelerate and expand. Streamlining the regulatory review of proposed forestry projects will increase project implementation and the number of acres that are treated.

Protecting Communities through Wildfire Risk Reduction

For the 26 percent of counties across the United States that are home to federal forest lands, the health of our federal forests has a direct impact on the health and safety of county residents. Healthy forests are less prone to disease, insect infestation and wildfire. While the causes of catastrophic wildfire are complex, the *status quo* of inaction has exacerbated present forest

conditions, which now present a great risk to both communities and the environment. The legislation recognizes this fact by requiring the costs and benefits of a proposed forest project be weighed against the costs and benefits of doing nothing to address wildfire threats, disease and insect infestation, and their impacts on local water supply and wildlife habitat.

Provisions of the legislation expediting regulatory analysis for timber salvage after major wildfires are also crucial and will provide the Forest Service with the revenue it needs to execute critical and time-sensitive post-fire reforestation work.

Providing Flexibility and Equitable Sharing of Forest Revenues

In addition to improving forest health and reducing wildfire risk for forest communities, increased active management will generate more revenue for the treasury and for the critical services counties provide, as well as promote job creation and economic growth in counties across the nation. Forest related industries provide over $50 billion annually in wages for nearly one million employees nationwide. These jobs provide a direct positive economic impact to many rural and forest counties across the country.

The growth in stewardship contracting in recent years has shown that a market driven approach to forest management projects can work to achieve both forest management goals and increased forest production. Counties support and are active partners in stewardship contracting initiatives across the United States, and we support provisions of H.R. 2647 that authorize the equitable sharing of stewardship contracting revenues with counties consistent with historic forestry practices. Forest revenue sharing payments support critical county services such as transportation infrastructure and education. America's counties look forward to working with Congress to further strengthen forest revenue sharing between counties and the federal government.

Since 2000, due to sharp declines in forest revenues, the federal government has provided payments to forest counties through the Secure Rural Schools (SRS) program. The SRS program provides a critical safety-net for forest counties impacted by declines in forest production and the loss of forest jobs and it will continue to be a critical program until the declines in forest production can be fully addressed. H.R. 2647 reforms Title III of SRS and provides much needed flexibility for counties to use a portion of SRS funding to support law enforcement patrols and ensure county first-responders have the equipment and training they need to provide high-quality emergency services on federal public lands to county residents and the millions of federal public lands visitors each year.

NACo urges the Committee to hold a hearing on this important topic and pass legislation to address both the health of our federal forests and funding for wildfire suppression. We stand ready to work with you to promote locally supported, consensus driven solutions to address management challenges, reduce the risk of catastrophic wildfire and increase economic activity on our federal lands.

Sincerely,

Matthew D. Chase
Executive Director

STATEMENT OF

THE NATIONAL ASSOCIATION OF COUNTIES

SUBMITTED TO THE

COMMITTEE ON AGRICULTURE, NUTRITION, & FORESTRY

UNITED STATES SENATE

FOR THE HEARING

WILDFIRE: STAKEHOLDER PERSPECTIVES ON BUDGETARY IMPACTS AND THREATS TO NATURAL RESOURCES ON FEDERAL, STATE AND PRIVATE LANDS

NOVEMBER 5, 2015

WASHINGTON, D.C.

Chairman Roberts and Ranking Member Stabenow,

On behalf of the 3,069 counties the National Association of Counties (NACo) represents, thank you for holding today's hearing on *Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands.*

This year's record breaking fire season has already consumed more than nine million acres, most of which is federal public land, and continues to threaten counties across the United States. We applaud the efforts Congress has already made to provide funding for wildfire suppression. However, catastrophic wildfires are merely a symptom of a much larger problem rooted in the health of our federal landscapes and our nation's federal land management policies.

Nearly 1,900 counties nationwide contain federal forests and other federally managed public lands. The health of our federal forests and public lands has a direct impact on the public health, safety and economic wellbeing of counties across the United States. Unhealthy forests increase community wildfire risk and can negatively impact community access to clean water and air, threaten wildlife habitats and reduce community opportunities for forest related tourism and jobs. NACo has supported the House of Representatives' efforts to reform federal forest management practices and wildfire suppression funding and applauds their passage of H.R. 2647, the Resilient Federal Forests Act of 2015. The legislation aims to improve the health and wellbeing of forest lands and communities by promoting collaboration and streamlining regulations for forest health projects, protecting communities through wildfire risk reduction and improving flexibility and fairness in forest revenue sharing.

NACo recognizes that reforming our nation's land management practices and addressing wildfire suppression funding is a task as complex as the causes of wildfire themselves. We hope the Senate is able to utilize the information from today's hearing to develop comprehensive forestry legislation that addresses both the long-term health of our federal forests and provides adequate funding for wildfire suppression.

Wildfire Costs Have a Significant Impact on County Budgets

For forest counties across the United States, the health of federal forests has a direct impact on the health and safety of county residents. Healthy forests are less prone to disease, infestation and wildfire. According to the U.S. Forest Service (USFS), 58 million acres of National Forest lands are at a high risk for catastrophic wildfire – that is more than thirty percent of the 193 million acre National Forest System.

The causes of catastrophic wildfire are multifaceted, including past forest management practices, decades of fire suppression, population growth in the wildland urban interface and record drought. However, one thing is clear, the *status quo* of inaction in forest management has only exacerbated present forest conditions. The significant human and economic costs of wildfires cannot be overstated. In 2014, wildfires claimed the lives of 10 firefighters and

countless civilians. In addition, local taxpayers in fire impacted communities will spend millions of dollars to ensure public safety during a fire event and clean up and rebuild after.

For example, in August 2013, the Rim Fire ignited in the Stanislaus National Forest in California. The wildfire burned for more than a year before it was declared extinguished in November of 2014. Eleven residences, three commercial buildings, and 98 outbuildings were destroyed by the fire. To ensure public safety, Tuolumne County initially spent more than $1.4 million in county taxpayer dollars to support evacuation efforts, clear roadways and perform hazardous tree removal.

This summer the Chelan Complex and Wolverine Fires ravaged multiple counties in central Washington, burning more than 154,000 acres and consuming 43 homes and another 39 outbuildings before the fires were contained. While federal, state and local firefighters were combatting the blaze, county first responders worked tirelessly to keep residents and visitors to the region's federal public lands safe during the wildfire event. In Chelan County, the Sheriff's Department logged more than 2,646 hours of overtime working to ensure public safety while the Chelan Complex Fire burned, costing the county more than $300,000 dollars.

However, the impacts of wildfires on counties are not confined to the time of the event. In most cases, counties, and their local taxpayers, will bear the costs of cleanup and recovery for many years to come.

After a fire is contained, winter rains falling on forest lands denuded of their vegetation by fire threaten communities with mudslides, rock falls and erosion that weakens critical county infrastructure. After the Waldo Canyon Fire of 2012 killed two people, burned more than eighteen thousand acres and destroyed 346 homes in El Paso County, Colorado, flooding and mudslides ripped through communities in the fire area, claiming additional lives and causing significant property damage. When these catastrophes occur, county first responders and road crews are tasked with cleaning up, with the millions of dollars in recovery costs borne by hardworking local taxpayers.

Collaborative Processes Promote Locally Driven, Sustainable Management for Forest Health

Counties believe that federal forests can and should be actively managed in a sustainable manner that ensures the health and productivity of our public lands for generations to come. The best way to ensure a balanced approach to addressing natural resource management challenges is by promoting locally led collaborative processes that encourage consensus driven decision making consistent with the requirement of federal agencies to coordinate with local governments.

When it comes to policy making, counties are intergovernmental partners, not just another stakeholder group. As such, counties have a vested interest in working with federal and state agencies and stakeholders to find ways to manage the federal lands within their boundaries actively and sustainably. Counties provide a wide array of government services that not only

are directly and indirectly affected by federal land management decisions, but that also contribute to the management of the federal lands, including planning and zoning, road and bridge maintenance, solid waste disposal, law enforcement, emergency management, fire protection, search and rescue, and economic development.

By convening a broad cross section of local stakeholders into a collaborative process, counties have found ways to navigate even the most complex natural resource challenges. Collaborative efforts bring federal, state and local governments and diverse stakeholders together to work out their differences in a meeting room, instead of in a courtroom. They provide the opportunity for robust local participation in the forest management planning process, promote local input on project design, prioritization and implementation and act as a conduit for public input on land management decisions.

Ultimately, local governments and stakeholders know best how to balance conservation needs and economic development in their own back yards. In fact, the USFS reports that collaborative processes, through the Collaborative Forest Landscape Restoration Program, have successfully treated nearly 1.5 million acres to address wildfire risk and nearly 85,000 acres have achieved a healthier condition through timber sales.

Counties across the United States have engaged in collaborative efforts to address their local natural resource challenges alongside their local and federal partners. However, collaborative efforts require a significant commitment of county and stakeholder time and resources to be successful.

Counties want to know that if they invest their taxpayers' time and money and engage in collaborative resource management those investments will be upheld by their federal agency partners and result in project completion. In recent years, multiple layers of environmental regulation and costly litigation have prevented or slowed the successful and timely implementation of consensus based collaborative restoration projects.

Across the country, critical large scale forest-management projects are being held up by federal land managers' fears of litigation and their own "analysis paralysis." As Commissioner Dave Schulz from Madison County, Montana, testified before the House Natural Resources Committee earlier this year, the work of his forest collaborative to address landscape level forest health challenges was significantly reduced by regulation and litigation. In his region, a broad coalition of local stakeholders from local government, industry and conservation interests, working through the Beaverhead-Deer Lodge Working Group had proposed a forest management project in a region known as the Boulder Lowlands to treat nearly 100,000 acres of land that had been identified as being in significant need of management. However, even though the working group had studied the area and advocated for robust landscape level treatment, the Forest Service reduced the project to 1,700 acres of lodge pole pine salvage due in part to fears of litigation over the project.

NACo supports streamlining the environmental regulation, litigation and appeals process, strengthening the involvement of local government in the federal decision-making process, expediting project analysis, and allowing for the implementation of critical management decisions in a timely and effective manner.

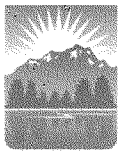
Healthy Forests Support Healthy Economies

Promoting collaborative processes, local engagement and active management will not only protect communities from the threat of wildfire and improve the health of our federal forests, it will also improve the overall economic health of forest counties. Active management will generate more revenue for the federal treasury and for the critical services counties provide, including planning and zoning, road and bridge maintenance, solid waste disposal, law enforcement, emergency management, fire protection, search and rescue and economic development. A 2007 study by the Congressional Budget Office found that every dollar invested in to promote healthy forests and wildfire mitigation saves more than five dollars in future disaster losses. Additionally, active management will also promote job creation and economic growth in forest counties across the nation.

Healthy and productive forests are a significant economic engine. Simply put, when forests are working, communities are working. Nationally, forest related industries provide over $50 billion in annual wages for nearly one million employees nationwide. In addition, timber revenues generated on federal forests are shared between the federal government and counties, providing a direct injection of much needed funds to support critical infrastructure, education, and health and safety programs.

Since 2000, due to sharp declines in forest revenues, the federal government has provided payments to forest counties through the Secure Rural Schools (SRS) program. The SRS program provides a critical safety-net for forest counties impacted by declines in forest production and the loss of forest jobs. It will continue to be a critical program until the declines in forest production can be fully reversed. Until then, ramping up active management of our federal forests would significantly improve the economic vitality of forest communities, creating a sustainable economic engine that promotes job creation and much needed economic activity to support critical county services.

Thank you for the opportunity to provide testimony to this committee on the impacts of wildfire and forest health on America's counties. As you can see, the presence of federal lands within a county provides many unique challenges and opportunities for county governments. Counties stand ready to work with you to promote locally supported, consensus driven solutions to address management challenges, reduce the risk of catastrophic wildfire and increase economic activity on our federal lands and look forward to partnering with the Senate to enact comprehensive legislation to address federal forest management reform.



WESTERN GOVERNORS' ASSOCIATION

Matthew H. Mead
Governor of Wyoming
Chairman

Steve Bullock
Governor of Montana
Vice Chair

James D. Ogsbury
Executive Director

Headquarters

1600 Broadway
Suite 1700
Denver, CO 80202

303-623-9378
Fax 303-534-7309

Washington, D.C.

400 N. Capitol Street, N.W.
Suite 376
Washington, D.C. 20001

202-624-5402
Fax 202-624-7707

www.westgov.org

October 29, 2015

Honorable Pat Roberts
Chairman
Senate Committee on Agriculture,
Nutrition and Forestry
328A Russell Senate Building
Washington, D.C. 20510

Honorable Debbie Stabenow
Ranking Member
Senate Committee on Agriculture,
Nutrition and Forestry
328A Russell Senate Building
Washington, D.C. 20510

Dear Chairman Roberts and Ranking Member Stabenow:

On behalf of Western Governors, I am writing in connection with the Committee hearing scheduled for November 5, 2015 entitled, "Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands." Wildfire is a critical issue for Governors throughout the western states. I am pleased to communicate relevant policy positions of Western Governors and respectfully request that this correspondence be placed in the written record of the hearing.

I commend three items for your consideration:

- Western Governors' Association (WGA) Policy Resolution 2013-03, *Wildland Fire Management;*
- WGA Policy Resolution 2014-10, *Regional Wildfire Fighting Resources;* and
- A March 19, 2015 letter from WGA to the Senate and House Budget Committees regarding the so-called practice of "fire borrowing."

Thank you for including the views of Western Governors as you study the complex issues involved in the wildfire discussion. Please consider the Western Governors – through the WGA – as a resource as you proceed with your important work on this and other matters affecting the American West.

Respectfully,

James D. Ogsbury
Executive Director

Attachments

WESTERN GOVERNORS' ASSOCIATION

Western Governors' Association
Policy Resolution 13-03

Wildland Fire Management and Resilient Landscapes

A. BACKGROUND

1. The health of the nation's federal forests and range lands has deteriorated due to a reduction in active management, past federal fire suppression policies, and changing climate conditions. Overgrowth and crowding in forests has allowed damaging insects and diseases to flourish. Many of our range lands are infested with "cheat grass" or other invasive species. The result has been a significant increase in the average acreage burned, higher fire suppression costs, increased impacts on public health, catastrophic damage to the environment and more communities threatened by wildfires every year.

2. Active management, such as range habitat restoration projects, improved livestock grazing practices, thinning, prescribed fire, and road maintenance, has been used successfully to improve the health of forest and range ecosystems. This type of active management can provide significant benefits to ecosystem function, while protecting and promoting development of healthy, resilient landscapes. However, complex analysis processes and legal challenges on federal lands have hampered efforts to increase active forest and range management sufficient to make a measureable difference on a landscape scale.

3. State aviation resources (both fixed and rotary-wing) are an integral part of wildfire suppression programs nationwide. Large fixed-wing air tankers play an important role in firefighting, as well. However, availability of federal air tankers has been significantly reduced due to the age and airworthiness of the existing air tanker fleet. The shortage of federal air tankers has put an increasing stress on state air tanker resources. An overarching problem is inaction on approving and funding a national wildfire aviation strategy. This strategy developed by federal and state wildfire management agencies identifies nationally-shared aerial resource needs. It is overdue to be updated and implemented.

4. In severe wildfire seasons, the U.S. Forest Service has "borrowed" from other program areas, such as community assistance and hazardous fuels reduction, to pay the costs of wildland fire suppression. In 2009, Congress passed the Federal Land Assistance and Management Enhancement Act (FLAME Act) which established a split fund to cover U.S. Forest Service and DOI wildland fire suppression costs.

5. The FLAME Act also directed the Secretary of the Interior and the Secretary of Agriculture, acting jointly, to develop a new National Cohesive Wildland Fire Management Strategy (CS). Phase I of the CS established three goals: Creating resilient

landscapes, fire adapted communities, and more effective response to wildfire. Under Phase 3 of the CS, regional science-based risk analysis reports and regional action plans have been completed. These documents and work in other regions will inform the new national strategy, which is expected to be completed early 2014.

6. When developing the CS, policy barriers and process complexities were identified which affect the ability to effectively and efficiently share resources, not only for wildfire, but for work on hazardous fuels and prescribed fire activities. The U.S. Forest Service role in state-state billing procedures is one of these complex processes and the federal authority to continue to perform this role is unclear. The USDA Forest Service provides initial payment for state resources responding to another state's wildfire incident and provides assistance for out of state resource mobilization tracking. By initially compensating states for mobilized resources and seeking subsequent reimbursement from states receiving outside assistance, the USDA Forest Service plays an essential role in facilitating rapid and efficient response to wildland fires.

7. The use of "Good Neighbor Authority" was approved by Congress in 2009 for projects in Colorado and Utah. The Authority enables state agencies to act as an agent for the federal agency to complete similar or complementary forest and land management activities across state, federal and private landowner boundaries. The Authority has not been widely used due to problematic contracting requirements. The Authority expires in September 2013.

8. The use of "Stewardship Contracting Authority" (SCA) was approved by Congress in 2003 to allow forest products to be exchanged for services rendered to restore forest function and health, improve wildlife habitat, or make improvements to recreational or other federal facilities. Where it has been used, SCA has been a valuable tool to restore forest health and wildlife habitat across the west. Stewardship Contracting Authority expires in September 2013, and reauthorization of SCA was proposed in the 2012 Farm Bill.

B. GOVERNORS' POLICY STATEMENT

1. Western Governors call on Congress and the Administration to fully implement the FLAME Act, to accomplish the goals of the National Cohesive Wildland Fire Management Strategy, and to implement the regional action plans, accepted by the Wildland Fire Executive Council, for each of the Cohesive Strategy regions.

2. Western Governors call on Congress to authorize active management and forest health improvement on federal forest lands. Western Governors call on Congress to enact legislation designed to reinforce the role and effectiveness of collaboration in implementing projects on federal forest lands, and to reduce administrative and preparation processes, costs, and legal challenges to science-based collaborative projects.

3. Western Governors support increased capacity and coordination of state, federal and private aerial resources to respond to wildland fire. The Governors support an immediate revision and implementation of the National Interagency Aviation Management Strategy.

4. Western Governors encourage expedited and coordinated consultation of requirements by federal and state agencies to address Endangered Species Act, Clean Water Act, Clean Air Act, and other environmental laws to ensure timely review and approval of needed forest restoration and active management on affected forest landscapes.

5. Western Governors support identification and correction of policy barriers that prevent the effective sharing of resources for wildland fire and land management activities.

6. Western Governors support reauthorization of the Good Neighbor Authority; improving the Authority based upon the experience on using it on the ground in Colorado and Utah; and broadening the use of the Authority's provisions to other states where local interest and support exists.

7. Western Governors support reauthorization of Stewardship Contracting Authority to enable federal agencies to more effectively implement forest health improvement projects on a landscape scale.

C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Governors direct the WGA staff, where appropriate, to work with Congressional committees of jurisdiction and the Executive Branch to achieve the objectives of this resolution including funding, subject to the appropriation process, based on a prioritization of needs.

2. Furthermore, the Governors direct WGA staff to develop, as appropriate and timely, detailed annual work plans to advance the policy positions and goals contained in this resolution. Those work plans shall be presented to, and approved by, Western Governors prior to implementation. WGA staff shall keep the Governors informed, on a regular basis, of their progress in implementing approved annual work plans.

WESTERN
GOVERNORS'
ASSOCIATION

Western Governors' Association
Policy Resolution 2014–10

Regional Wildfire Fighting Resources

A. BACKGROUND

1. The nation's strategy for fighting wildland fires centers on a partnership among federal, state and local responders.

2. States often share firefighting resources with other states through existing wildland fire compacts or agreements.

   - The Northwest Compact includes Oregon, Washington, Idaho, Montana, Alaska and the Canadian provinces of British Columbia, Alberta, Saskatchewan and the Yukon and Northwest Territories (Public Law 105-377, 105th Congress, 12 November, 1998).

   - The South Central Interstate Compact includes Texas and Oklahoma (Public Law 642, 83rd Congress, May 1953).

   - The Great Plains Interstate Compact includes North Dakota, South Dakota, Colorado, Nebraska and Wyoming (Public Law 110-79, 110th Congress,13 August, 2007).

3. Seven Western states are not currently members of a fire fighting compact: Arizona, California, Kansas, Nevada, New Mexico, Utah and Hawaii.

4. The U.S. Forest Service (USFS) and some states own or lease specialized airplanes and helicopters. Two trends have converged, leading to a rethinking of the nation's aerial wildfire fighting strategy: the specialized fleet of leased private aircraft is aging (supply falling) and the average number, cost, length and size of wildfires is increasing (demand rising).

5. The USFS has indicated that only 13 large air tankers will available during the 2014 Fire season, compared with 16 in 2013.

6. Many states have developed programs that facilitate and coordinate a local, rapid response to fires when they start, keeping fires small, less damaging and costly.

B. GOVERNORS' POLICY STATEMENT

1. Western Governors believe western states should work together to identify options to expand the availability and sharing of wildfire firefighting resources.

2. Western Governors encourage Congress and the Administration to ensure the federal aerial wildfire fighting fleet is rebuilt as expeditiously as possible.

3. Western Governors urge the USFS to ensure that states at greatest risk of wildfires have priority access to Federal Excess Personal Property to acquire "loaned" wildfire fighting equipment.

4. Western Governors urge the Department of Defense to identify all available National Guard wildfire fighting resources and ensure that states know how to best access that equipment so it is available when and where it is needed.

5. Western Governors encourage expansion of local fire mobilization plans, where appropriate, to conduct initial response as rapidly as possible to diminish the risk of small wildfires quickly growing out of control, especially in areas where lives and property are at greatest risk.

C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Governors direct the Western Governors' Association to empanel an ad hoc committee of interested western states to discuss ways to expand the range of wildfire fighting equipment and personnel at their disposal and share them regionally.

2. The committee's first meeting should focus on, among other topics:

    - identification of potential gaps in and costs for leasing and sharing equipment and personnel;

    - identification of the best mechanisms to share state-leased or purchased firefighting equipment, including:
        - o expansion of existing western compacts to include additional states;
        - o creation of new compact agreement(s);
        - o sharing of newly leased or state purchased aircraft; and
        - o creation of a regional non-profit aerial wildfire fighting organization

3. The committee will meet as soon as practical and report back to the Governors initial findings relevant to the current fire season and provide a full report on its findings and recommendations by December 2014.

WESTERN GOVERNORS' ASSOCIATION

Brian Sandoval
Governor of Nevada
Chairman

James D. Ogsbury
Executive Director

Headquarters:
1600 Broadway
Suite 1700
Denver, CO 80202

303-623-9378
Fax 303-534-7309

Washington, D.C. Office:
400 N. Capitol Street, N.W.
Suite 376
Washington, D.C. 20001

202-624-5402
Fax 202-624-7707

www.westgov.org

March 19, 2015

Honorable Mike Enzi
Chairman
Senate Committee on the Budget
624 Dirksen Senate Office Building
Washington, DC 20510

Honorable Tom Price
Chairman
House Committee on the Budget
207 Cannon House Office Building
Washington, DC 20515

Honorable Bernard Sanders
Ranking Member
Senate Committee on the Budget
624 Dirksen Senate Office Building
Washington, DC 20510

Honorable Chris Van Hollen
Ranking Member
House Committee on the Budget
134 Cannon House Office Building
Washington, DC 20515

Dear Chairman Enzi, Ranking Member Sanders, Chairman Price and Ranking Member Van Hollen:

Western Governors support Congressional efforts to end the so-called "fire borrowing" practice used by the U.S. Forest Service and the Department of the Interior to fund their wildfire suppression activities.

The history of this matter is well-documented, as restoration and prevention work in western forests has been negatively impacted by "fire borrowing" for years. We recognize that Congress is also responsible for maintaining process controls to ensure a responsible use of taxpayer dollars. Western Governors also understand the budgetary challenges posed by wildfire funding and the need for agency accountability.

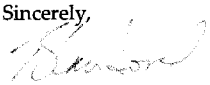
We also assert that changes are needed, as the current funding situation has allowed severe wildfires to burn through crippling amounts of the very funds that should instead be used to prevent and reduce wildfire impacts and costs. This represents an unacceptable set of outcomes for taxpayers, at-risk communities, and responsible stewardship of federal land.

We are encouraged that bipartisan legislation, including the Wildfire Disaster Funding Act (S. 235, H.R. 167), has been proposed to address this important issue. This legislation would solve the budgetary issue by creating a funding structure similar to that used by other federal agencies, such as the Federal Emergency Management Agency, when responding to natural disasters.

Western Governors appreciate the opportunity to work constructively with you on ways to improve the current funding structure while addressing the challenges of wildfire mitigation and suppression.

Thank you for your consideration of our views, especially as preparations for the 2015 fire season get under way.

Sincerely,



Brian Sandoval
Governor, State of Nevada
Chairman, WGA

cc:
Honorable Thad Cochran, Chairman, Senate Committee on Appropriations
Honorable Barbara Mikulski, Ranking Member, Senate Committee on Appropriations
Honorable Hal Rogers, Chairman, House Committee on Appropriations
Honorable Nita Lowey, Ranking Member, House Committee on Appropriations
Honorable Mike Crapo
Honorable Ron Wyden
Honorable Mike Simpson
Honorable Kurt Schrader

STATEMENT FOR THE RECORD SUBMITTED BY DR. TIMOTHY QUINN, EXECUTIVE DIRECTOR, ASSOCIATION OF CALIFORNIA WATER AGENCIES

TO THE SENATE AGRICULTURE, NUTRITION AND FORESTRY COMMITTEE, NOVEMBER 5, 2015

Chairman Roberts, Ranking Member Stabenow and members of the Committee, the Association of California Water Agencies (ACWA) is pleased to submit this statement for the record for the November 5, 2015 hearing titled " Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources of Federal, State and Private Lands".

My name is Timothy Quinn. I serve as the Executive Director of the Association of California Water Agencies. ACWA's highly diverse membership includes approximately 430 public agencies that supply over 90 percent of the water delivered in California for residential, agricultural, environmental and industrial uses. Prior to coming to ACWA in July 2007, I was a Deputy General Manager at the Metropolitan Water District of Southern California for 21 years.

ACWA appreciates the Committees' attention to addressing the wildfire/headwater issues and strongly believes that it is critical that both forest management reforms and resolution of the "fire borrowing" issue are addressed in any legislation focused on improving the health and resiliency of our forests. By addressing both of these issues together we can ensure forest restoration activities can proceed at the pace and scale needed to improve the forest conditions that have led to the devastating and costly fire season this summer.

ACWA's Headwaters Framework: ACWA has developed a new policy document with recommendations designed to create more resilient water resources through effective headwaters management. The document, "Improving the Resiliency of California's Headwaters – A Framework," builds on ACWA's Policy Principles on Improved Management of California's Headwaters, approved by the ACWA Board of Directors in March 2013.

Developed by ACWA's Headwaters Framework Working Group, the document details the role that headwaters play in California's water management system, outlines the benefits of healthy headwaters, identifies current challenges and provides a brief history of headwaters management. A series of case studies also provide examples of what's working for integrated and adaptive management in the upper watersheds.

The Framework lays the foundation for future work that could have substantial statewide water supply and ecological benefits, while improving relations among those ACWA members in the upper watersheds and those who use water closer to sea level.

"Improving the Resiliency of California's Headwaters – A Framework," makes nearly 30 specific recommendations in the areas of improved planning, coordination and implementation, managing headwaters resources, research and financing headwaters improvements. To read the complete recommendations, please visits ACWA's website at http://www.acwa.com/Headwaters.

CAFWA: ACWA would like to associate itself with comments submitted by the California Forest and Watershed Alliance (CAFWA) for this hearing. CAFWA is a unique alliance of disparate interests including

organizations that represent water, environment, local government, timber, and agricultural interests all dedicated to finding a solution to California's ever-growing forest health and fire risk issues. The members of CAFWA, the Association of California Water Agencies, California Farm Bureau Federation, California Forestry Association, The Nature Conservancy California Chapter, and Rural County Representatives of California, are working together to seek new ways to promote proactive, science-based, and ecologically sound forest management practices that will reduce the risk of destructive megafires. CAFWA's goal is to protect California's forests, natural resources, and local economies by accelerating the pace and scale of forest restoration.

Problem Statement: California forests, and other forests across the western United States, are at serious risk of large, high-severity wildfires that threaten lives, communities, water resources, wildlife habitat, and recreation. Although forest thinning and controlled burning are proven methods of reducing the risk of destructive megafires, the current pace and scale of forest management activities are inadequate given the scope of the problem. Our fire season is starting earlier and lasting longer with fires burning hotter than ever before. The growing cost of Forest Service fire suppression activities is negatively impacting the budget available to carry out critical restoration projects that protect forests and will reduce firefighting costs over the long term. Severe drought in western states is also exacerbating the decline of forests due to beetle bark infestations. There is an urgent need to restore our forests to a more resilient condition to protect our water resources, communities, and ecological values.

2015 Wildfire and Budget Impacts: According to the California Department of Forestry and Fire Protection (CAL FIRE), almost 306,000 acres of private and state land and another 400,000 acres of federal lands have been affected by wildfires this year alone and the state estimates that $209 million will be spent, just in suppression costs. Similarly, at the national level, the U.S. Forest Service estimates that this year it will spend 52% of its entire budget on wildfires, with that amount expected to increase to 67% by 2025. Contrast that to 1995, when the Forest Service spent 16% of its budget on wildfire costs; such drastic increases in the percentage of their budget that is used for fighting fires cuts into non-fire programs such as restoration and land management, which, in turn, increases the likelihood of catastrophic wildfires the following year.

Recent Experiences: The Place County Water Agency (PCWA), an ACWA member, provided testimony to the House Resources committee last Spring that illustrates the severe impacts megafires can have on water utilities. PCWA is located in the Middle Fork American River watershed, about 2 hours east of Sacramento, California. Their watershed spans some 412 square miles, and provides enough drinking water for 250,000 citizens and enough renewable hydroelectric energy for 100,000 homes. 36% of their watershed, some 150 square miles – has burned since 2000. While some of these fires have been mild in nature, others have been increasingly devastating because of the intensity and severity with which they engulf the landscape. This troubling trend, fueled by decades of active fire suppression and changes in forest management policy and exacerbated by natural drought conditions, has led to a situation that puts California's water supplies at great risk, and leaves local water agencies bearing the consequences.

King Fire

PCWA's experience with the King Fire in 2014 offers a good example. The King Fire was ignited on the afternoon of September 13, 2014 in El Dorado County. For the first 4 days, the fire burned in a mix of privately managed timberlands and the El Dorado National Forest, growing to approximately 20,000

acres by the morning of Wednesday, September 17, and spreading at a moderate rate. Wednesday afternoon brought extremely low humidity and increased wind speed, which drove the fire into the remote and densely forested Rubicon River canyon, an important tributary to the American River. Once it reached the Rubicon canyon, the fire exploded.

In the next 12 hours, the fire grew by almost 50,000 acres, making a run of almost 16 miles overnight. Fire officials on the ground used words like "unprecedented" and "unheard of" to describe the speed and intensity at which this fire destroyed the landscape. A rare mid-September rain storm and a calming of wind conditions were the only two factors that halted this fire from continuing its advance into the Lake Tahoe watershed and even more devastating consequences.

The King Fire ravaged the Rubicon River watershed with high-severity incineration. Complete loss of vegetative cover exposed soils to erosion on thousands of acres of steep, sloping river canyons. Sediment and debris derived from this erosion threaten the integrity and function of hundreds of millions of dollars of water and power infrastructure, as well as miles of aquatic and riparian habitat vital to frog and fish species of concern to state and federal regulatory agencies.

All told, the King Fire burned 153 square miles in three watershed and two counties. More than 60% of the fire burned at high intensity. The costs were tremendous, and are ongoing:

- $118,500,000 in direct firefighting costs was borne by the public;
- $8,000,000 in immediate costs to repair and protect water and energy infrastructure was borne by local utilities;
- Untold costs to roads, cultural resources, and wildlife habitat, and soil resources;
- Ongoing costs to local utilities that must now deal with the aftermath.

The Aftermath

The effects of large catastrophic wildfire on natural and man-made infrastructure lasts for decades, and the effects on the forest itself can last for centuries. In the case of water and hydroelectric utilities that operate in California's watersheds, the aftermath is often worse than the event itself.

Wildfires in the Sierra tend to occur at the worst possible time of year, at the end of summer. Not only are forest fuels at their driest, but the transition from the arid California summer to the wet fall can happen quickly and with devastating results. Particularly in the case of high-intensity fire, trees whose root systems once held steep slopes in place are now dead. Soils that were once a rich and stable organic ecosystem that was resistant to erosion are now baked into a loose cake which has a tendency to reject water from rain events and then all at once become a muddy slurry that tumbles off of canyon walls and into rivers and streams. As the receivers of mud, rock and dead trees, river systems become overwhelmed with this debris and transport it downstream during high flow events.

Once this debris enters lakes and reservoirs, it fills in valuable storage space, blocks spillways and ruins equipment and generating machinery. PCWA has experienced this before. The Star Fire which burned in 2001 is still depositing large dead trees and tons of sediment into PCWA's facilities some 14 years later. PCWA, like many other utilities in the Sierra, must regularly, and at great cost, clean their reservoirs of sediment, rock and trees or they would become useless mud flats.

In the case of the King Fire, the U.S. Forest Service estimates that over 300,000 of tons of topsoil are poised to erode into Rubicon River from King Fire burned area. Ralston Powerhouse and Afterbay Dam are located a short distance below 19 miles of scorched Rubicon River canyon and when this reservoir fills up, hydropower production and water flow for our is stopped for months at a time. This stretch of

for landscape-scale forest management, possibly tied to a job-creation program to bolster rural economies and provide more certainty over multiple years, and (2) regulatory incentives. Regulatory incentives may include providing direction to the Forest Service to encourage management of the national forests on a landscape scale, including innovative approaches to complying with the National Environmental Policy Act (NEPA) that would meet the policy's goals while expediting forest management. This may also significantly decrease per-acre analysis costs and expedite project implementation.

Address Pace of Judicial Process – ACWA is concerned that frivolous legal challenges can reduce the pace of forest management necessary to reduce wildfire risk and promote more resilient forest conditions. The goal should be to expedite collaborative, ecologically-based landscape-scale management. Congress should work on a solution that advances this goal.

Funding for Forest-Water Research and Demonstration Projects -- Congress should build upon the link between healthy forests, watersheds, and downstream water quality and quantity by funding landscape-scale research and demonstration projects. The goal of such research should be to document and quantify the extent to which landscape-scale forest management serves to safeguard water supply by reducing the risk of high-severity wildfires and resulting erosion and sedimentation, by increasing water yield, and in other respects.

CONCLUSIONS

Accelerating forest restoration and hazardous fuels reduction is essential to securing multiple benefits from our National Forests. These benefits include wildlife habitat, clean water supplies, recreation, forest products, carbon sequestration and healthy rural economies.

Inaction on forest health is contributing to catastrophic megafires. ACWA believes that it is critical that both forest management reforms and resolution of the "fire borrowing" issue are addressed in any federal legislation focused on improving the health and resiliency of our forests.

Contact: Dr. Timothy Quinn, ACWA Executive Director, TimQ@acwa.com , or David Reynolds, ACWA Director of Federal Relations, dlreyns@sso.org .

river has also been identified by PCWA in collaboration with regulatory agencies as important habitat for frog and fish species of concern, habitat which will be severely impacted by fire-induced sedimentation.

This impact can last for many years. While trees and brush can begin to regrow within a decade of even an intense fire, the fertile soils that have taken millennia to establish are damaged for many centuries. This long after-effect means that water facilities are ultimately less valuable, our water dirtier, and water districts' ability to serve a growing California economy water and energy products diminished for many decades.

OPPORTUNITIES

Unfortunately, fuels reduction projects in overgrown forests, such as in Placer County above, continue to face numerous obstacles. Despite partnerships between stakeholders and federal, state and local governments, and science that clearly demonstrates the benefits of fuels reduction projects, the pace and scale of proactive forest management is not nearly keeping up with the increased size and severity of wildfires in our western forests. ACWA believes there are opportunities at the federal level to help accelerate forest restoration, such as:

- Building a diverse, bipartisan, western urban-rural coalition in to advocate for increasing the pace and scale of ecologically-based active management in forests and watersheds.
- Communicating the importance of healthy forests by emphasizing the multiple values that they provide including, but not limited to, water resources.
- Pursuing increased funding and new funding sources for forest management from federal, state, and private sources.
- Advocating for policy and legislative reforms that will promote ecologically sound forest restoration.
- Advancing monitoring and research to improve the state of scientific knowledge to better direct future land management decisions.

Congress is encouraged to pass federal legislation that addresses the following issues:

Promote Landscape-Scale Collaboration -- Congress should incentivize and reward landscape-scale collaboration with local governments and diverse stakeholders by expediting environmental review for collaboratively-based projects that address insect or disease infestation, reduction of hazardous fuels particularly near communities, forest health restoration, wildlife habitat improvement, or protection of municipal water sources.

Fix "Fire Borrowing" -- The structure of wildfire funding desperately needs to be changed to prevent so-called "fire borrowing" - or the shift of dedicated forest management funds at the U.S. Department of Interior and the U.S. Department of Agriculture, to fund wildfire suppression activities – *in addition to*, addressing the increasing costs of suppression over time, which continues to erode program budgets. Currently, the Wildfire Disaster Funding Act is the only proposal positioned to address the multiple complexities of fire budgeting. Resolution of this issue, whether through the Wildfire Disaster Funding Act or an alternative methodology, is critical.

Expedite Forest Restoration -- Congress should consider providing additional direction and incentives to the Forest Service to undertake fuels reduction and forest management activities on a landscape scale, where supported by effective collaborations. This could include a combination of (1) financial incentives

The CorpsNetwork
Strengthening America through service and conservation

www.corpsnetwork.org

November 10, 2015

The Honorable Pat Roberts
Chairman
Senate Committee on Agriculture,
Nutrition, and Forestry
328A Russell Senate Office Building
Washington, DC, 20510

The Honorable Debbie Stabenow
Ranking Member
Senate Committee on Agriculture,
Nutrition, and Forestry
328A Russell Senate Office Building
Washington, DC, 20510

Dear Chairman Roberts and Ranking Member Stabenow;

On behalf of The Corps Network's Service and Conservation Corps (Corps) across the country, we write to respectfully request your support for the Wildfire Disaster Funding Act, H.R. 167 and S. 235. This important legislation will reform how wildfire suppression is funded in order to significantly minimize the harmful practice of transferring funds from critical programs to pay for wildfire suppression. The Wildfire Disaster Funding Act would fund response to the most disastrous wildfires similar to how the Federal Emergency Management Agency (FEMA) funds other disaster response under the Balanced Budget and Emergency Deficit Control Act of 1985. Instead of competing with funding for response to other natural disasters such as floods, tornadoes, and hurricanes, wildfire disasters would have their own relief mechanism.

The Corps Network's 100+ Corps are diverse in mission and membership and strive to improve quality of life for our participants and in our communities. From building trails and campgrounds on our nation's iconic public lands, to responding to natural disasters and wildfire remediation and fighting, Corps provide communities with valuable services, improve lives, and the environment. Increasing disasters such as fires, risk the lives of Corpsmembers as well as interrupt other recreation, maintenance, and economic development activities on public lands.

Wildfire seasons are getting longer and major wildfires are becoming increasingly more costly to suppress. This national problem is causing a crippling burden on the Department of the Interior and the USDA Forest Service's land management functions as they shift resources to fund suppression activities. Federal wildfire suppression will always be fully funded by the government – even if it comes at the expense of programs that improve forest health and mitigate future wildfires. However, this current ad hoc process of funding wildfire is inefficient and ineffective in delivering on nationwide agency land management priorities set by Congress and virtually assures that overall federal outlays will increase.

We believe a solution to fire funding should: 1) allow access to disaster funding; 2) minimize impacts from transfers; and 3) address the increasing costs of suppression over time. The WDFA, (S. 235, H.R. 167) is a bipartisan proposal that addresses these three items. We encourage you to incorporate WDFA language in the FY2016 appropriations or other related legislative vehicles moving through Congress to ensure this serious budgetary issue is addressed this year.

Additionally, since the Land Water Conservation Fund (LWCF) was not reauthorized in the most recent Continuing Resolution and the fund continues to be used to pay for wildfire suppression, it is also

The CorpsNetwork
Strengthening America through service and conservation

www.corpsnetwork.org

important that take action be taken to fully fund and reauthorize LWCF. Without LWCF, access to our public lands is diminished and proactive forest management provided through LWCF's Forest Legacy Program is reduced. We cannot afford for conservation programs like LWCF to bear the burden of wildfire suppression and fighting and need LWCF to be fully funded to help address the many conservation and recreation needs that exist.

We again respectfully urge your support for Wildfire Disaster Funding Act (WDFA) language in the FY16 appropriations omnibus or passage through other must-pass legislative vehicles. The WDFA is a critical, important step to ensure the long-term sustainability of our nation's forests and other public lands and our Corps stand ready to continue helping manage and improve our nation's important natural resources and great outdoors.

Sincerely,

Mary Ellen Sprenkel

Mary Ellen Sprenkel
CEO

CORPS OF THE CORPS NETWORK

ALASKA
Anchorage Park Foundation (Youth Employment in Parks)
Student Conservation Association (Anchorage Regional Office)

ARIZONA
ACE (American Conservation Experience) (Flagstaff)
Arizona Conservation Corps (Flagstaff & Tucson)

CALIFORNIA
ACE (American Conservation Experience) (Santa Cruz)
California Conservation Corps
Civicorps
Conservation Corps of Long Beach
Conservation Corps North Bay
Desert Restoration Corps (SCA)
Fresno EOC Local Conservation Corps
Kern Service and Conservation Corps
Los Angeles Conservation Corps
Orange County Conservation Corps
Sacramento Regional Conservation Corps
San Francisco Conservation Corps
San Gabriel Valley Conservation Corps
San Joaquin Regional Conservation Corps
San Jose Conservation Corps & Charter School
Sequoia Community Corps
Student Conservation Association (Oakland Regional Office, Western Region Headquarters)
Urban Conservation Corps (Southern California Mountains Foundation)
Urban Corps of San Diego County

COLORADO
Conservation Legacy
Larimer County Conservation Corps
Mile High Youth Corps (Denver and Colorado Springs)
Rocky Mountain Youth Corps (Steamboat Springs)
Southwest Conservation Corps (Four Corners/Durango & Los Valles/Salida)
Western Colorado Conservation Corps

CONNECTICUT
Knox Parks Foundation - Green Crew

DISTRICT OF COLUMBIA

The CorpsNetwork
Strengthening America through service and conservation

www.corpsnetwork.org

Student Conservation Association (Capital Region Office)

FLORIDA
Community Training Works, Inc. Young American Conservation Corps
Greater Miami Service Corps

GEORGIA
Greening Youth Foundation

HAWAII
KUPU - Hawaii Youth Conservation Corps

IDAHO
SCA Idaho AmeriCorps

ILLINOIS
Student Conservation Association (Chicago Regional office, Central Region headquarters)
YouthBuild Lake County
Youth Conservation Corps, Inc.

IOWA
Conservation Corps Minnesota & Iowa

LOUISIANA
Limitless Vistas, Inc.

MAINE
Maine Conservation Corps

MARYLAND
Civic Works
Montgomery County Conservation Corps (a program of Latin American Youth Center)

MASSACHUSETTS
Massachusetts Corps (SCA)

MICHIGAN
Michigan Civilian Conservation Corps
SEEDS
Student Conservation Association (Detroit Regional Office)

MINNESOTA
Conservation Corps Minnesota & Iowa

MISSISSIPPI
Climb CDC Conservation Corps

MISSOURI
AmeriCorps St. Louis

MONTANA
Montana Conservation Corps

NEVADA
Nevada Conservation Corps (a program of the Great Basin Institute)

NEW HAMPSHIRE
New Hampshire Corps (SCA)

NEW JERSEY
New Jersey Youth Corps of Atlantic Cape May
New Jersey Youth Corps of Camden County / The Work Group
New Jersey Youth Corps of Elizabeth
New Jersey Youth Corps of Jersey City
New Jersey Youth Corps of Middlesex County
New Jersey Youth Corps of Monmouth County / Interfaith Neighbors, Inc.
New Jersey Youth Corps of Newark / International Youth Organization
New Jersey Youth Corps of Paterson
New Jersey Youth Corps of Phillipsburg
New Jersey Youth Corps of Trenton
New Jersey Youth Corps of Vineland
Student Conservation Association (New Jersey Regional office)

NEW MEXICO
Rocky Mountain Youth Corps
Santa Fe YouthWorks
Southwest Conservation Corps Ancestral Lands (Pueblo of Acoma & Shiprock)

NEW YORK
Adirondack Corps (SCA)
Excelsior Conservation Corps
Green City Force
Hudson Valley Corps (SCA)
Bronx Justice Corps
Harlem Justice Corps
Brooklyn NY Justice Corps
Queens Justice Corps

1275 K Street, NW, Suite 1050, Washington, DC 20005 p: 202.737.6272 f: 202.737.6277

The CorpsNetwork
Strengthening America through service and conservation

www.corpsnetwork.org

New York Restoration Project
Headwaters Youth Conservation Corps (a program of The Place)
Onondaga Earth Corps
The Service Collaborative of Western New York
Student Conservation Association (New York City)

NORTH CAROLINA
ACE (American Conservation Experience)
Northwest Piedmont Service Corps

OHIO
WSOS Community Action

OREGON
Heart of Oregon Corps
Northwest Youth Corps

PENNSYLVANIA
PowerCorps PHL
Student Conservation Association (Philadelphia/Camden Regional office)
Student Conservation Association (Pittsburgh Regional office)

SOUTH CAROLINA
The Sustainability Institute Energy Conservation Corps

TENNESSEE
CAC AmeriCorps
Southeast Youth Corps

TEXAS
American YouthWorks Texas Conservation Corps
Student Conservation Association (Houston Regional Office)

UTAH
ACE (American Conservation Experience) (Salt Lake City & St. George)
Canyon Country Youth Corps
Utah Conservation Corps

VERMONT
Green Mountain Club
Vermont Youth Conservation Corps

VIRGINIA
Student Conservation Association (HQ)

WASHINGTON
EarthCorps
Mt. Adams Institute
Student Conservation Association (Seattle Regional Office)
Washington Conservation Corps

WEST VIRGINIA
Citizens Conservation Corps of West Virginia

WISCONSIN
ADVOCAP (Fresh Start program)
Great Lakes Community Conservation Corps
Milwaukee Community Service Corps
Operation Fresh Start
Renewal Unlimited, Inc. (Fresh Start program)
Student Conservation Association (Milwaukee Regional office)
WisCorps - Wisconsin Conservation Corps

WYOMING
Wyoming Conservation Corps

CC: The Honorable Tom Vilsack, Secretary, US Department of Agriculture
The Honorable Sally Jewell, Secretary, US Department of the Interior
The Honorable Robert Bonnie, Under Secretary of Natural Resources and Environment, US Department of Agriculture
The Honorable Tom Tidwell, Chief, U.S. Forest Service
Christy Goldfuss, Managing Director, White House Council on Environmental Quality

1275 K Street, NW, Suite 1050, Washington, DC 20005 p: 202.737.6272 f: 202.737.6277

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY Edmund G. Brown Jr., Governor

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
P.O. Box 944246
SACRAMENTO, CA 94244-2460
(916) 653-7772
Website: www.fire.ca.gov

November 9, 2015

The Honorable Pat Roberts
Chairman
Senate Agriculture Committee
328 A Russell Senate Office Building
Washington, D.C. 20510

The Honorable Debbie Stabenow
Ranking Member
Senate Agriculture Committee
328 A. Russell Senate Office Building
Washington, D.C. 20510

Dear Chairman Roberts and Ranking Member Stabenow:

I would like to thank you for convening last Thursday's productive hearing, titled "Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands," and share for the record California's insight on this topic. While the human, environmental, and economic toll of wildfires are well understood, the solutions to improve forest health, prevent catastrophic wildfires, and mitigate its consequences are still being developed and implemented. Central to these efforts are sufficient and consistent federal funds that complement local, tribal, state and nonprofit investments.

In 2013, in response to unprecedented drought, Governor Edmund G. Brown Jr. developed the California Water Action Plan. Early on, this integrated document identified improvements to forest management and watershed health as a significant aspect of securing California's water future. The efforts to address drought, forest management, invasive pests/disease, and wildfire were further strengthened October 30, 2015, when Governor Brown issued a state of emergency proclamation and wrote to Secretary Vilsack to address California's tree mortality epidemic. The United States Forest Service recently estimated that more than 22 million trees have already died in California due to current conditions. In 2015, the State experienced 8,069 fires on state and federal lands, burning through 824,499 acres of critical forestland, watershed, and habitat. The volume of dead and dying trees will likely exacerbate the state's critical fire conditions as we move into 2016 and beyond.

California has and will continue to make significant investments to combat fires and improve the management of our forest lands. There are strong partners at the federal, tribal, local, municipal, and nonprofit level who collaborate with the state to address the needs of improved forest management. But the lack of robust funding to fight catastrophic wildfires has undercut efforts to perform these critical management activities, and in fact has resulted in a diminished capacity to carry out projects which would lead to fewer catastrophic wildfires. California joins other western states and the Western Governors' Association in supporting a bi-partisan solution to "fire borrowing."

In addition to stabilizing funding for both fire and forest management activities, we must continue to improve coordination between agencies, align regulatory obligations, and develop opportunities to leverage private and non-profit resources. In California, we are proud of the conversation and alignment that has developed between stakeholders. Working within our current mandates, California stakeholders continue to develop ways to reduce the incidence of

catastrophic fires, improve recovery of lands, promote water quantity and quantity from watersheds, address pests and disease, and enhance biodiversity and ecosystem resilience. Any proposed changes to that regulatory environment should be done thoughtfully, ensuring that the benefits of public engagement, incentives for long-term solutions and resiliency, and protections for the environment are maintained.

Thank you again for your time and attention on these critical issues. California stands ready to assist you as you endeavor to find a permanent solution to wildfire funding, and find policy solutions that build on the successes and learn from the challenges of managing our forests in an integrated and collaborative way.

Sincerely,

Ken Pimlott

KEN PIMLOTT
Director

October 01, 2015, 08:00 am
Resilient Federal Forests Act treats symptom and disease

By Reps. Bruce Westerman (R-Ark.) and Kurt Schrader (D-Ore.)

As you read this, catastrophic wildfires continue to burn the western United States with no end in sight. More than 8.8 million acres of federal land have burned this summer. The U.S. Forest Service is transferring another $250 million from forest management accounts to battle these fires – a practice known as fire borrowing. This brings the total amount of additional appropriations for wildfires to $700 million for the year – the highest amount since 2002.

Yesterday, Congress passed legislation reimbursing the Forest Service for this amount. Unfortunately, more funding alone will not fix our wildfire crisis.

On Tuesday, Sept. 15, the Obama administration implored Congress to address fire borrowing. This is a problem that must be fixed, but dealing with fire borrowing alone only treats the symptoms without addressing the underlying disease.

On July 9, the House passed H.R. 2647, the Resilient Federal Forests Act. H.R. 2647 treats both the disease of overgrown, mismanaged forests and the resulting symptoms of wildfire, disease, and insect infestations. It solves the fire-borrowing problem, and sets in place wise forest management policies that reduce the risk of future catastrophic wild fires.

The timing of the president's request comes when California Gov. Jerry Brown (D) has already estimated a price tag of $212 million for his state's efforts to fight wildfires this season. The Valley fire in California is on track to become the worst wildfire in the state's history. With more than 60 large fires burning across the west and several other "small" fires burning in the same area, costs are estimated to soar even higher.

While federal and state governments are looking at hundreds of millions in costs to fight wildfires, property owners face staggering losses that will likely soar into the billions. With fires continuing to grow, more homes and lives are at risk.

The current lack of preventative forest management action is proving catastrophic for our national forest system. With the threat of massive fires growing every year, addressing only one aspect of the problem is both shortsighted and dangerous. In addition to classifying certain large-scale wildfires as disasters, H.R. 2647 also promotes proper forest management practices based on proven science.

Part of active management is not only prevention, but quick reforestation following a catastrophic event. Current regulation includes environmental review processes that are simply too slow to be effective for the removal of dead trees. On average, the Forest Service reforests less than three percent of areas destroyed by wildfire. The Resilient Federal Forests Act requires 75 percent of an area impacted by wildfire be reforested within five years and allows for expedited environmental review to ensure the removal of dead trees to pay for reforestation efforts. The federal government successfully conducted an expedited environmental review for salvage work on forests in Mississippi after Hurricane Katrina. It can do the same on our national forests after wildfires.

These efforts at reforestation and forest management are not small tasks, which is why the bill includes a provision to allow the Forest Service to accept funds from state governments for assistance with management projects. Additionally, tribes will be given the opportunity to assist with the management of national forest lands adjacent to reservations in order to reduce the risk of not only wildfires, but also insects and disease.

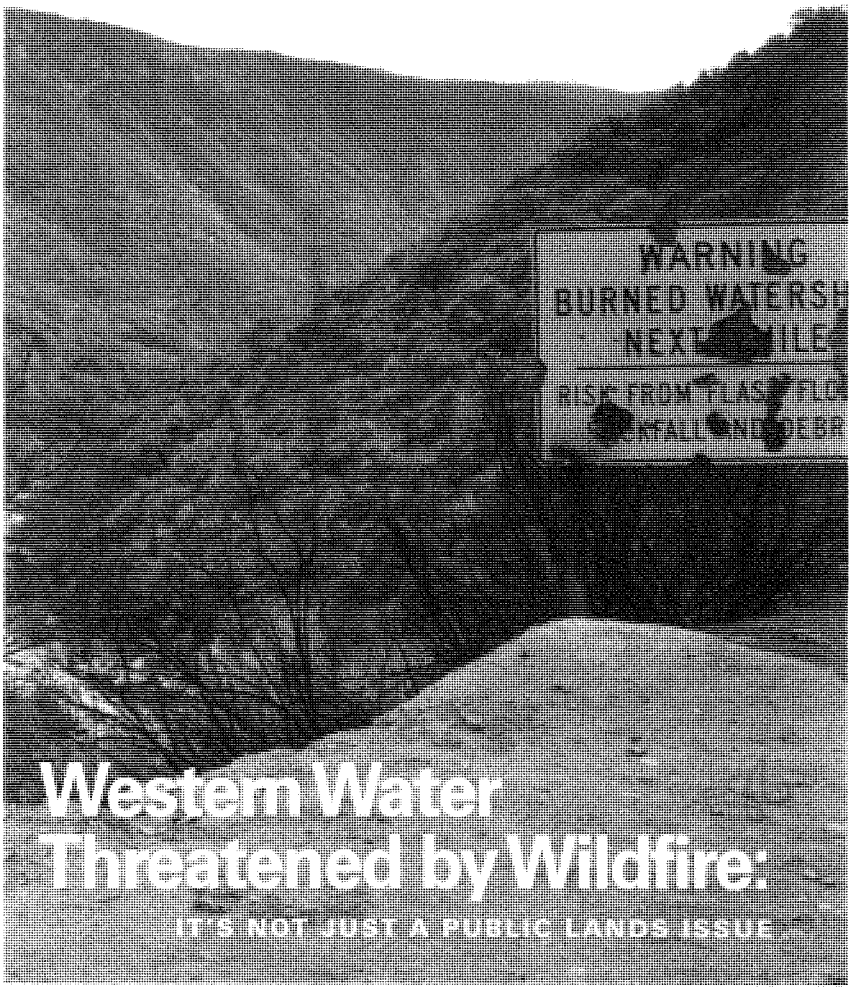
With the loss of nearly 9 million acres this year due to catastrophic wildfires, Americans – especially those in the west – are seeing the direct impact of ineffective management. We need to deal with this problem in a fiscally responsible way and that is why we are urging our colleagues in the Senate to quickly take up and pass the Resilient Federal Forests Act. The millions of acres burned, hundreds of millions of dollars in property damage and lost timber, and the loss of lives this fire season demand immediate action on this long-term solution.

Westerman has represented Arkansas' 4th Congressional District since 2015. He sits on the Budget; the Natural Resources; and the Science, Space and Technology committees. Schrader has represented Oregon's 5th Congressional District since 2009. He sits on the Energy and Commerce Committee.

From The Hill blogs

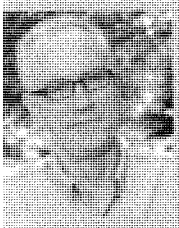
http://thehill.com/blogs/congress-blog/energy-environment/255491-resilient-federal-forests-act-treats-symptom-and

American Forest Foundation



Message from

TOM MARTIN, PRESIDENT AND CEO OF THE AMERICAN FOREST FOUNDATION



2015 was another extremely dry year for the West. Temperatures were higher, snow packs across the West hit an all-time low, reservoirs were depleted and unprecedented water restrictions were enforced.

These dry conditions combined with our changing climate and the often overly dense conditions of many Western forests, produced a catastrophic wildfire season that saw more than 9 million acres burned across the West, a level reached only four times on record.

Recent fire seasons like this year's season are now lasting 78 days longer than they did in 1970 and are burning hotter. Fire suppression costs have multiplied and the problem is getting worse.

The consequences are tragic. Hundreds of homes destroyed, thousands of residents forced to evacuate and both firefighter and civilian lives lost.

But fire also poses another risk. It threatens the clean drinking water supply for millions of Westerners, drinking water that in dry years like 2015, becomes even more valued.

Most don't realize our Western forests are a natural water filter and storage system, keeping water clear and replenishing streams and rivers with clean water that ultimately finds its way to the faucets of at least 66 million people who live in the West. A fire that burns with catastrophic severity can wipe out entire stands of forests and the streams and rivers that run through the watershed and can become flooded with erosion and debris, compromising already scarce clean water supplies, including drinking water for many of the West's major metropolitan areas.

While we cannot do much about drought that leads to increased wildfires and water scarcity, we can do more to solve the problem of too much fuel in the forests that increases the likelihood of catastrophic wildfire and threatens clean water.

Revealing results from a first-of-its-kind assessment, Western Water Threatened by Wildfire: It's Not Just a Public Lands Issue, from the American Forest Foundation, examines which lands in 11 Western states are at high risk of wildfire and where those high-risk forests threaten clean drinking water.

The results are both surprising and significant. The report shows that contrary to conventional wisdom, wildfires are not exclusively a public lands issue. In fact, more than one-third of the high-risk acres in private and family lands, which is land owned by individuals, families, trusts, corporations and conservation and natural resource organizations, in some states like California, are 50 percent. Moreover, nearly 40 percent of the lands that keep the water clean in mountain watersheds and are at high risk of fire are private and family owned.

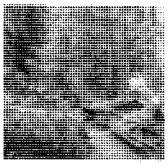
With the new finding, and knowing that wildfires and insect threats don't stop at property lines, cross boundary approaches for reducing wildfire risk that involve public, tribal, private and family lands are essential. Our forests are only as resilient as their weakest link. Restoration work needs to occur on public and tribal lands, but as this report highlights, if we are to protect clean water, we must address wildfire risk on private and family lands as well.

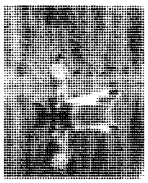
What's more, the report highlights the striking mosaic private and family lands. Individual and family forest owners, the earlier referred to as family forest owners, hold one of the largest segments of this land. They are mothers and fathers, children and grandparents who own 10 or 40, or maybe 100, acres of forest. They own their land for many reasons, ample enjoyment of the outdoors, a place to hunt or fish on weekends, income or as a legacy and investment. Regardless of the reason they own woods, they all care deeply for their land and want to be good forest stewards.

Our friendships and survey of nearly 1,600 family forest owners in the West reveals these owners are concerned about the threat of catastrophic wildfire to their land, and they are eager to become part of the solution now by restoring their own forests to more healthy conditions, which in turn will help protect clean water. However, family forest owners need support—financial and technical—to carry out this stewardship. Included in this assessment are a series of significant recommendations that together can provide family forest owners with needed support and engage private and family landowners in restoration work that will help protect the drinking water for millions of Americans.

We have an opportunity to take action now to address this serious threat. We need to engage and help the owners of private and family lands, who are eager to become part of the solution, to ensure wildfires are not costing us our precious water supply. As the drought continues and the inevitable next fire season arrives, we cannot miss the time now to protect this source here in the West: clean water.

Executive Summary





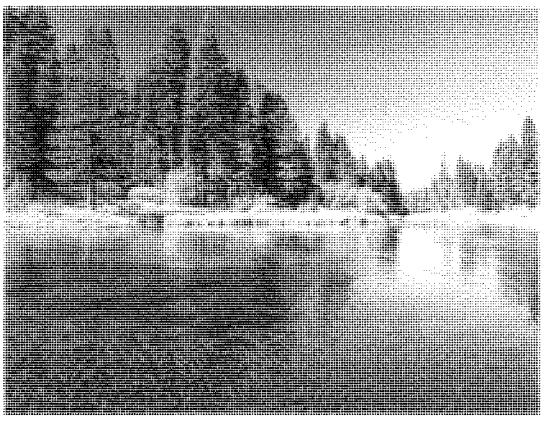
Water is the arid West's most precious and most vulnerable resource.

Western water allows metropolises to bloom in the desert, it fuels America's largest agricultural economy and it supports a ski industry worth more than $6 billion to state and local economies (Burakowski and Magnusson, 2012). The delivery of clean and abundant water is extremely sensitive to disaster, whether natural or man-made. As years-long drought conditions across the region reinforce, the water quantity and quality in the West is never certain.

What is certain, however, is that in order to protect clean water it is vital to protect the forested ecosystems that play a critical role in capturing, filtering and storing this resource. What is also certain is that every year some portion of the West's forests will burn. While fire is as natural to a stand of trees as sunshine or rain, today's severe wildfires pose a threat to public safety, including our drinking water, as never before.

The impact catastrophic wildfires have on water quality is well understood. When forest fires burn abnormally hot they destroy the forest and soil capacity to absorb and filter rainfall. The consequence can be runoff from denuded and barren soils that foul streams and rivers with mud, soil and debris. What are less well-documented are the ownership patterns across high fire risk landscapes. While the West is a checkerboard of different landownerships, public lands dominate the landscape. Yet, fire does not respect the jurisdictional lines we draw on a map.

In a first-of-its-kind spatial assessment conducted across 11 Western states, the American Forest Foundation brings new light and answers to these key questions: Who owns the forests at greatest risk of wildfire? How much of these forests at high risk of fire overlap with important water supply watersheds? How much of this risk is borne by private non-industrial landowners? For the purposes of this report, private non-industrial landowners include individuals, families, trusts, partnerships and conservation and natural resource organizations,



while excluding corporate and tribal ownerships. The report refers throughout to private non-industrial landowners and land as private and family landowners and lands. Also, for purposes of this report, Native American tribal lands, while distinct from public lands, are accounted for in tables and maps as part of the public land acreage. This ensures that their acreages are accounted for but not confused with the focus of this report, which is private and family lands.

The assessment, based on data from the Council of Western State Foresters (2015) and the U.S. Forest Service, analyzed fire risk across all burnable wildland vegetation and important water supply watersheds across all ownership types. The analysis shows more than 52 million acres of high fire risk across the 11 conterminous Western states are on private and family forestland, an area nearly the size of Kansas. Of this ownership category, more than 9 million acres are owned by thousands of individual and family landowners, typically called family forest owners.

When looking at individual states, the report shows the proportion of fire risk on private and family lands is even higher. In New Mexico, for example, almost half of all high fire risk acres are on private and family lands with more than 7 million acres at risk.

Of the 34 million acres across the West both at high fire risk and in watersheds of important water supplies, more than 13.5 million acres fall on private and family lands, 3.5 million of which are owned by family forest owners. In some states, most notably California and Oregon, these private and family landowners own more lands at risk in key watersheds than the federal government.

The clear conclusion is fire in the West is not exclusively a public lands problem. Understanding the distribution of risk can and should inform the strategies and approaches to mitigating that risk, particularly in areas where a critical public good such as water is implicated. But recognizing that private and family landowners have an outsized role to play in safeguarding Western water by itself is not enough. Understanding how best to empower these landowners to be more active stewards of their lands and of a public good like water is critical.

The second part to this report looks more closely at the behaviors, motivations and barriers to action of Western family forest owners. Nearly 1,800 family forest owners across the West were

More than 40%

of the lands that support the Western clean water supply that are at a high risk to wildfire,

are private and family-owned.

surveyed to gauge their level of activity in reducing fire risk, the barriers most significant to them, and their motivations to action. While the analysis showed three in five landowners place fire as a primary concern and are, in fact, more concerned with fire today than they were five years ago, relatively few had taken action to reduce that risk. Barely half, 54 percent, have created defensible space around their primary residence. And only 25 percent have already attempted to restore forest health by thinning or removing underbrush. Only one in four landowners say they will "definitely" undertake these actions in the next 12 months.

Despite this relative lack of activity, Western family forest owners are motivated. Across acreage size, income level, age and duration of ownership, 70 percent are motivated to reduce risk on their lands by a sense of duty to be a responsible landowner. Fifty-eight percent valued improving the overall health of the forest. Yet, a large majority of 77 percent cite the high cost of management as a serious barrier to carrying out the actions needed to restore forest health. This pattern held across income levels, from the poor to the wealthy.

Finally, the report includes three recommendations to address the challenge of protecting clean water supplies from wildfire risks, given the newly understood and significant role of private and family landowners. The recommendations focus on solutions that can be implemented immediately, recognizing that there is a range of additional solutions, some of which will take years to pursue. The report recommends strategies that:

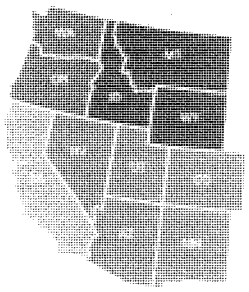
- Increase on-the-ground cross-boundary efforts to engage private and family landowners focused on delivering measurable risk reduction and forest restoration at scale;
- Improve policy and public funding to support on-the-ground action, including private and family lands; and
- Catalyze markets that lower the costs of wildfire risk reduction and forest restoration and make ongoing healthy forest management economical.

There is no such thing as a fire-proof forest. Indeed, resource professionals such as foresters and ecologists will be the first to tell you that *forests need fire to remain healthy and productive.* At the same time, today's hotter more frequent fires pose a threat to Western forests and the water they protect like never before. The future of the forests and the people of the West depends on restoring a resiliency in those forests to survive the inevitable fire. Safeguarding water quality and the many other public benefits provided by forests—such as clean air and habitat for fish and wildlife—requires empowering private and family landowners generally and family forest owners particularly, to manage their land in a way that contributes to the health of their forests and to the collective good of the nation.

Introduction

CONNECTING PEOPLE, WATER, FORESTS AND FIRE

The importance of water quality and supply to the past and future of the West cannot be understated. Ground water stored in vast underground aquifers and surface water flowing from forested headwaters enabled the West to flourish over time. Forests filter and capture snow and rainwater, allowing it to seep into the ground and flow to streams and rivers in a steady and clean condition. Today, roughly 64 million people across 11 Western states collectively depend on Western surface water for their daily needs. Altogether these Westerners consumed 6.7 billion gallons per day; with an additional 57 billion gallons of surface water used daily to irrigate crops in those states in 2010 alone (Maupin et al., 2014), supporting an agricultural industry worth tens of billions of dollars.



For the purposes of this report, we define the Western US to include these eleven states

However, in the arid West, delivery of clean water is never a certain proposition. In fact, concern over water quality and quantity is now viewed by Western voters as an extremely or very serious problem, even more so than unemployment (Colorado College Report and Conservation in the West Annual Survey, Colorado College, 2015).

Decades of research demonstrates how forests help to recharge groundwater, regulate stream flow, filter water and mitigate flooding. Although only about 31 percent of the West is forested (Forest Resources of the United States, 2007), 65 percent of the water supply in the Western United States comes from forests (Furniss et al., 2010).

As certain as the connection is between the Western water supply and forests, so too is the certainty that some portion of the West's forests will burn every year. According to the National Interagency Fire Center, more than 5.7 million fires have burned some 162 million acres nationwide since 1960, an average of more than 3 million acres annually, an area nearly the size of New Hampshire.

Along with elevation and moisture gradients, wildfire is the dominant ecological force shaping the growth, health and renewal of Western forests. For thousands of years, Ponderosa pine was the dominant forest type at lower elevations. These forests were characterized by relatively few trees per acre and abundant grassland between the few individual trees and clumps of trees. Fires historically tended to burn gently every few years, clearing underbrush and helping to keep the forests healthy and regenerating. In the higher elevations, spruce and fir forests were dominant. These forests naturally burned hot and violently, but only every 700 to 1,000 years. These fires would cause the entire forest to begin anew. Fire frequency and severity played an essential role in creating the diversity and maintaining the health of Western forests.

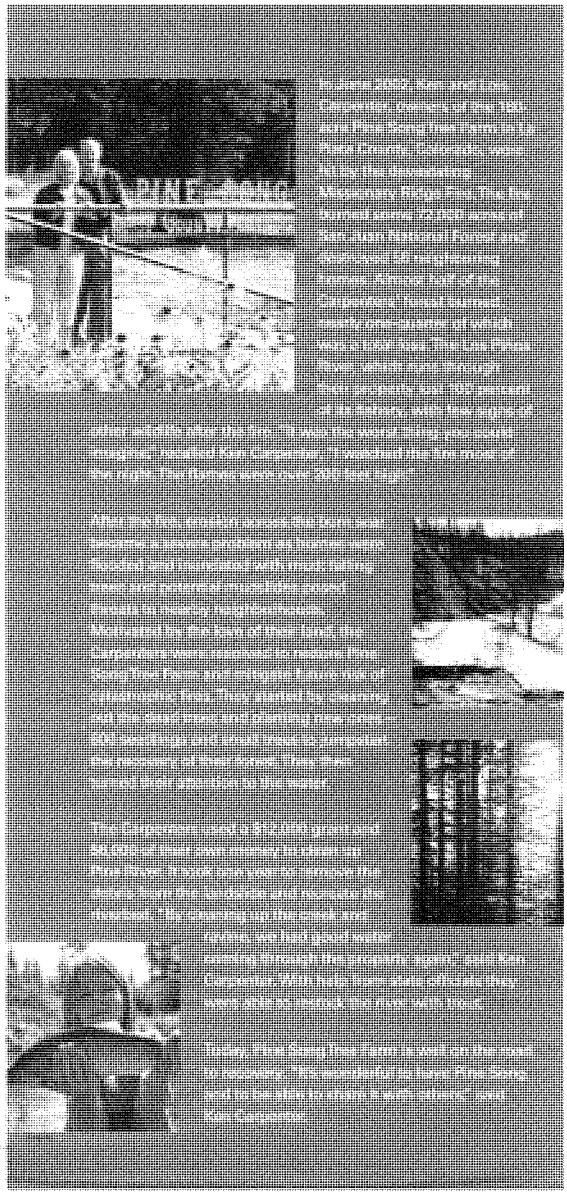
However, for the past 100 years, humans have disrupted fire's natural role in an effort to essentially eliminate all fire from

Across 11 Western states more than **a third of the high wildfire risk falls on private and family-owned land,** not public land.

the forest. The result is a classic example of unintended consequences. While the intention was to safeguard lives and protect forest goods and services, the consequence was an unprecedented build-up of fuels in many forests. For example, Ponderosa pine forests were transformed from generally open savannahs with relatively few large, fire-resistant trees to stand thick with small trees that were allowed to grow in the absence of naturally occurring wildfires. This unhealthy build-up of trees and other plants unchecked by periodic fire is now fueling many of the catastrophically large and devastating fires Western forests are experiencing on a regular basis.

Fire, simply put, is the dominant force shaping Western forests. The connections between water and forests, and forests and fire are relatively well understood. What is lacking, however, is an accounting of fire risk across public and tribal, and private and family landownerships and the importance of that ownership for the delivery of water and other benefits that come from Western forests.

For the first time, this report, *Western Water Threatened by Wildfire: It's Not Just a Public Lands Issue*, answers these key questions across the West: Where are high fire risk acres located? Who owns them? How do these acres overlap with the water supply on which the West depends? The findings are an essential first step in identifying management solutions and developing cross-boundary, public-private partnerships to safeguard the Western water supply from potential catastrophic fire across jurisdictions.



Fire and Water

Healthy forests are key to a healthy water supply. Under normal conditions, forests act as a complex and dynamic water filter. They are a multi-layered strata of tree canopies, understory grasses, forbs, shrubs and decaying organic matter and roots that efficiently and sustainably manage the pace of rain as it falls to Earth and either cycles it back into the atmosphere or sends it downslope carrying this vital resource to our springs, rivers, lakes, cities and farms. Fire can profoundly alter this elemental dynamic.

In low severity fires, like those that naturally burned in many forests prior to the West's rapid development in the 19th century, changes to watershed function are minimal. But a high severity fire that burns in a forest type that hasn't evolved to accommodate it can damage a healthy and functioning watershed for decades. In these cases all vegetation, from tree canopy to forest floor, is burned in large continuous blocks, allowing rainwater to fall unimpeded to the exposed soil. In addition, surface soil temperatures, which can reach a sustained 1,500 degrees Fahrenheit or greater, can sterilize and essentially destroy the living soil structure, creating an impenetrable layer through which water cannot seep (Ice et al., 2004). This type of fire creates a "parking lot" effect where soils become hydrophobic, causing rainfall to sheet off the forest floor, flooding streams, eroding stream banks and riverbeds and on steep terrain unleashing mudslides.

After the Fourmile Canyon Fire in 2010 near Boulder, Colorado, water quality plummeted when summer thunderstorms washed the burned landscape into waterways. Turbidity (a measure of water clarity) skyrocketed, as did dissolved organic carbon and nitrates; some heavy metal concentrations increased up to four times their normal levels while the streams themselves carried 8,000 times their normal water volume (U.S. Geological Survey, 2013).

Water users downstream of severely burned forests face dramatic declines in water quality, increased costs associated with water treatment and water supply complications that can persist for years (Brunskill, 2013). Providing safe drinking water for urban centers can require costly clean up after severe fires, and impacts can be long term and widespread, effecting communities as far as 100 miles away from the actual burn site (Meixner, 2004).

With changes in climate and intense drought, compounded by uncharacteristically dense low to mid-elevation forests, the potential impact of severe fire on water quality is significant. Climate scientists predicted the West will see a 3.6 to 9 degree increase in summer temperatures by 2050 (Climate Central, 2012). Already, fire seasons average 78 days longer than they did in the 1970s (U.S. Forest Service, 2015). The future of this region is likely to be defined by overall drier conditions, which will exacerbate the threat to water resources that are vulnerable to severe fire.

Reducing fire risk through ecology-based restoration treatments in many low and mid-elevation forest types, however, can restore forest resiliency and watershed function in the face of the inevitable fire. Studies show that the degree to which wildfire degrades water quality and supply depends on wildfire intensity and the health of a watershed prior to a burn (New Mexico Environment Department, 2015).

The benefits of such restoration investments tend to be greatest in watersheds where the probability of a severe fire occurring and where the consequences of such a burn are highest.

Fire Resilience Through Partnership

As an ecological force of nature like hurricanes or floods, fire does not respect the jurisdictional boundaries we place on the land. Where fuel, topography, and climate align, fire will burn public and private lands alike. And because of the sheer size of and intensity in which many Western wildfires burn today, isolated efforts to restore forest resilience or protect water and communities are often not sufficient.

Looking ahead, greater attention must be given to action not only on private and family lands as this report suggests, but also to partnerships that work across public and private land boundaries. There are thousands of family forest owners eager to become part of the solution by restoring Western forests to more healthy conditions, which reduces the risk of catastrophic wildfire, which in turn helps protect clean drinking water. There is need and opportunity for federal and state agencies, universities, national and local non-profit organizations to invest and work in partnerships to engage private and family landowners to complement the forest resilience work of their neighbors, whether public or private. Coordination and collaboration across jurisdictions has never been as important.

The scale of the challenge demands nothing less.

Risk and Value:

A SPATIAL ANALYSIS

Meeting the 21st-century fire and water resource challenges in the West requires a landscape-scale and cross-jurisdictional look at where the risk of fire is greatest and where that risk is relative to forests that protect clean drinking water. In 2015, the American Forest Foundation conducted a spatial analysis of wildfire risk across 11 Western states (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY) based on land ownership.

This risk ownership profile was then overlaid with data depicting watersheds important for water supply, as defined by the U.S. Forest Service (USFS) and the Environmental Protection Agency (EPA). The results of this analysis describe not only the relative fire risk among public and tribal and private and family lands throughout the West, but also the degree to which that fire risk poses a threat to public water supply. The findings highlight significant Western fire risk on these private and family lands overall and in particular in watersheds important to the water supply needs of communities across the West.

DATA, DEFINITIONS AND METHODS IN BRIEF

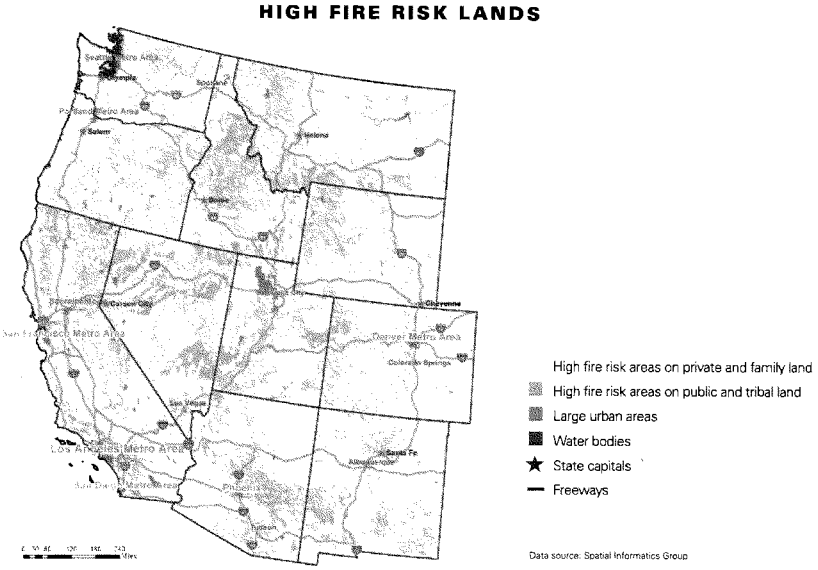
This assessment was based on state-specific data for the 11 Western states from the Western Wildfire Risk Assessment (WWA), a 30-meter resolution, tiled-by-state data set and a product of the Council of Western State Foresters and the Western Forestry Leadership Coalition.

- The regionally leveled Fire Threat Index (FTI) integrates the probability of an acre igniting and the expected final fire size based on the rate of spread in four weather percentile categories into a single measure of wildland fire susceptibility.
- The Drinking Water Importance Areas (DWIA layer identifies an index of surface drinking water importance, reflecting a measure of water quality and quantity, characterized by Hydrologic Unit Code 12 (HUC 12) watersheds. The USFS Forests to Faucets (F2F) project is the primary source of the drinking water data set.

In addition to the ownership data contained in the WWA data set, the assessment utilized a geospatial data set published by the USFS, titled *Public and Private Forest Ownership in the Conterminous United States: Distribution of Six Ownership Types* to quantify private forests across the West.

At least 64 million Westerners depend on surface water for their clean water supply that comes from or is filtered by **forested watersheds.**

HIGH FIRE RISK LANDS



For the purposes of this report, private non-industrial lands includes ownerships by individuals, families, trusts, estates, family and unincorporated partnerships and associations, as well as conservation and natural resource organizations across all burnable wildland vegetation (referred to throughout this report as private and family lands). It excludes tribal lands as depicted in the WWA data set and corporate forest ownership as depicted in the USFS data set.

The analysis identified areas where high fire threat overlay areas of high water supply importance. The analysis ran a set of pixel-level queries on the data layers. High fire threat areas were determined by querying for pixels above a minimum threshold value from the WWA's FTI layer. Water supply importance was based on querying for pixels above a minimum threshold value from the DWIA layer. All watersheds with value greater than an established threshold were also included in the importance map after rasterizing those watersheds.

The result depicts areas of no fire threat, fire threat and no relevant values, and fire threat and water importance value. This was done for each state separately. Within each state, this analysis was done for all lands and for all private lands.

Complete data sources and methodologies are presented in Appendix 1.

and New Mexico. In Washington state, there are one million more acres at risk on private lands than on public and tribal lands.

Because there is so much private and family lands at risk, private and family landowners must play a key role in the solution. How they manage their land determines how well clean water is protected. Assessing the fire situation in the West demands a broad landscape view, one that looks at all lands under all ownership, and works to address fire threats wherever they occur. Forest restoration priorities that focus on only federal lands will fail to safeguard the clean water provided by more than one-third of the West's high-risk acreage.

WHO OWNS FIRE RISK?

The relative risk of wildfire on more than 750 million acres of burnable wildland vegetation across 11 states was analyzed. The findings show that fire threat looms large over the arid West, with one in five acres in these states at "high fire risk" (145 million acres) across all ownerships. Of these high-risk lands, the analysis also shows 52 million acres fall on private lands—an area nearly the size of Kansas.

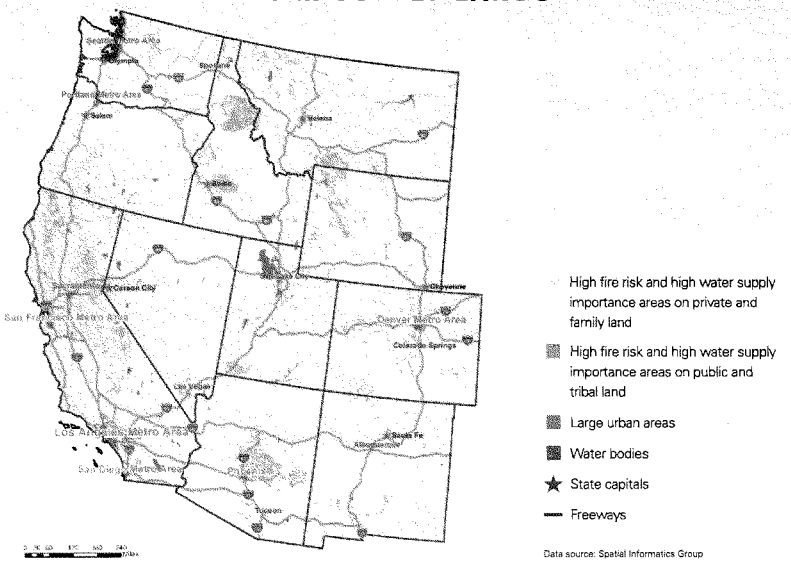
None of the 11 states has fewer than 2,161 square miles at high fire risk on private land. But the ownership patterns of high fire risk vary considerably by state. In fact, over half of the overall footprint of high fire risk on private and family land occurs in just three states- California, Montana,

State	Acres of High Fire Risk on Private Land*	Acres of High Fire Risk on Private Family Forest Land**	Acres of High Fire Risk on Public and Tribal Lands
All	9,076,342	52,279,015	93,061,841
AZ	263,834	1,338,321	9,721,307
CA	2,964,146	12,268,458	11,920,472
CO	519,289	1,383,250	4,273,011
ID	354,964	3,926,654	12,735,679
MT	844,439	7,909,662	10,087,543
NM	1,768,151	7,023,820	7,272,749
NV	186,058	4,312,284	16,793,314
OR	647,548	3,626,351	5,145,250
UT	925,013	3,551,260	8,426,872
WA	360,519	2,676,277	1,621,728
WY	242,331	3,662,678	5,063,918

*Private and family land refers to land owned by individuals, families, trusts, estates, family and unincorporated partnerships and associations, as well as conservation and natural resource organizations across all burnable wildland vegetation.

**Family forestland refers to land owned by families and individuals and is a subset of private and family land.

HIGH FIRE RISK AND IMPORTANT WATER SUPPLY LANDS

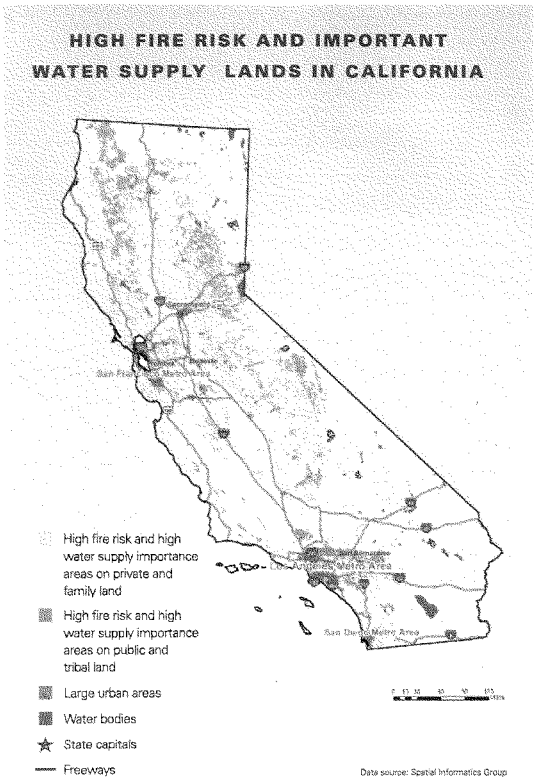


WESTERN WATER SUPPLY AND FIRE RISK

The 2011 Las Conchas Fire in New Mexico started on a June afternoon when a tree fell on a power line. By the time the fire was 100 percent contained in early August, it had burned more than 150,000 acres. Three weeks later, heavy rains in the Jemez Mountains led to widespread area flooding. The National Weather Service estimated that three to six inches of rain fell over the burn scar (Matlock, 2011) that stretched more than 22 miles from the southern edge of Bandelier National Monument to Santa Clara Pueblo lands where roughly 80 percent of the pueblo's watershed burned severely (Wright, 2015). As a result of the fire, hydrologists estimate that certain storm conditions could now send up to 21,000 cubic feet of water per second (cfs) down the Santa Clara Canyon where a channel that diverts creek water through the residential areas of the pueblo can handle only 8,000 cfs.

Just as fire is an inevitability in the West, so too are significant storm events. Where the two follow in sequence, the impacts to communities can be severe.

Of the 145 million acres of high



fire risk land across the West, one in four acres, or 34 million acres in total, are located in watersheds USFS and EPA scientists have identified as important to meeting the needs of urban and rural populations alike. More than 13.5 million acres of this risk is owned by private and family landowners, making significant portions of the public water supply dependent on the health of land in the hands of private and family owners.

In fact, in some states, acres of private and family lands at high fire risk in important water supply watersheds outnumber acres on public and tribal land. In drought-ravaged California, where Sierra Nevada snowpack is at a 500-year low (Morin, 2015), private and family landowners own 7 million acres of the land in important watersheds that carry high fire risk compared to 5.9 million acres on public lands. In Oregon, a state also experiencing extreme drought conditions, 684,000 acres of high risk acres in important watersheds are located on private and family lands compared to 645,000 on public lands.

Landowners want to do the right thing on their land, and

are motivated to take action
to reduce th
help protect clean wate

State	Acres of Family Forestlands* with High Fire Threat and High Water Supply Importance	Acres of Private and Family Lands** with High Fire Threat and High Water Supply Importance	Acres of Public and Tribal Lands with High Fire Risk and High Water Supply Importance
All	3,557,675	13,178,948	25,796,546
AZ	16,391	377,201	2,716,316
CA	2,134,748	7,038,686	5,871,320
CO	251,692	636,047	1,397,843
ID	151,619	1,508,027	3,604,764
MT	240,565	1,701,569	2,339,757
NM	138,574	280,778	522,858
NV	12,764	181,845	272,524
OR	204,036	653,999	641,237
UT	204,029	808,124	678,563
WA	57,140	203,635	451,419
WY	26,970	377,825	1,644,026

*Private and family land refers to land owned by individuals, families, trusts, estates, family and unincorporated partnerships and associations, as well as conservation and natural resource organizations across all burnable wildland vegetation.
**Family forestland refers to land owned by families and individuals and is a subset of private and family land.

Six states—California, Colorado, Idaho, Montana, Oregon, and Utah—account for roughly 88 percent of all high fire risk in important watersheds on private and family lands across the West. And while Arizona, Nevada, New Mexico, Washington, and Wyoming together account for the remainder of the total acres at risk on private and family lands and in important watersheds, each of these states has seen single fire events in recent years that burned an area larger than their entire private and family lands footprint.

This spatial analysis highlights a crucial point in the national discussion of the West's fire challenge: public water supplies cannot be protected without the engagement of private and family landowners. Only by looking at the landscape as a whole, and prioritizing an all-lands approach to fire management, can the considerable threat severe fire poses to water quality on public, tribal, private and family lands be addressed.

isk of wildfire and

n their forests.

The Upper South Platte watershed is a 2,600 square-mile watershed located to the south and west of Denver, Colorado. The five major municipal supply reservoirs in the watershed supply drinking water to nearly one-third of Colorado's residents (1.5 million residents). The watershed has also been the site of five significant fires in the past 20 years. Denver Water, the state's largest water utility, has spent more than $27 million repairing damage to water supply infrastructure caused by those fires.

While about 60 percent of the watershed is publicly owned, there are more than 80,000 acres owned by private forest landowners, many of whom are in high fire risk portions of the watershed.

A new collaboration—the Upper South Platte Partnership—has brought together federal, state and local agencies and research institutions, water providers and national and local non-profits, including the American Forest Foundation, to coordinate forest restoration work and investments to help protect this vital water supply.

"All hands, all lands" efforts like this are focused on increasing forest resiliency before the next fire strikes and in doing so help protect the drinking water supply on which so many depend.

Private Land Stewards:

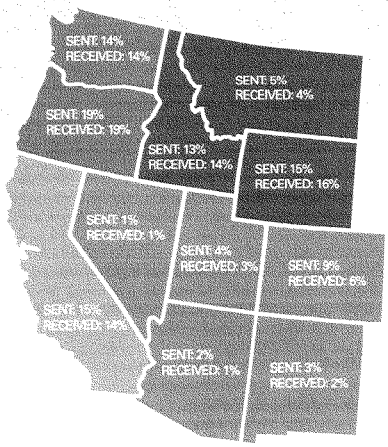
A SURVEY OF FAMILY FOREST OWNERS

As the report demonstrates, fire risk reduction through active forest restoration on private and family lands needs to play a role in protecting water. Defining the scope and nature of the West's fire challenge across ownership patterns is a necessary first step to creating sustainable solutions. But by itself, it is not enough. Understanding the perspectives, values and needs of private and family landowners in meeting this challenge is also fundamental to protecting clean water.

One of the largest groups of private landowners is family forest owners. These families and individuals own their land for many reasons: simple enjoyment of the outdoors, a place to hunt or fish on weekends, income or as a legacy and investment for their children and grandchildren. Regardless of why they own their land, they are united in caring deeply for their land. Yet, many family forest owners face obstacles to active stewardship to restore forests, reduce fuel loads and reduce the risk of catastrophic wildfire.

In order to better understand how best to reach and support family forest owners in the stewardship of their land with respect to wildfire, the American Forest Foundation undertook a first-of-its-kind West-wide survey of these family forest owners. Family and individual landowners with 10 acres or more of forest cover were surveyed to (1) understand the level of risk reduction and forest restoration activity happening on family forestlands in the West, (2) learn landowner motivations in taking these actions, and (3) identify the most significant barriers to action. The mail survey was conducted by Public Opinion Strategies among 1,767 landowners throughout the 11-state region. The interviews were completed June 22 to July 27, 2015. The margin of sampling error for this survey is +/– 2.33 percent at the 95 percent confidence interval for the total sample.

SURVEY DISTRIBUTION AND RESPONSE BY STATE



PERCEPTIONS OF WILDFIRE RISK

Most family forest owners in the West see fire as a serious concern. Three in five landowners surveyed place fire as a primary concern and 67 percent have witnessed a wildfire firsthand on their land or on neighboring land. More than half, 55 percent, said they worry more about fire now than five years ago. Looking forward, half of these landowners think it is almost certain or at least very likely that a catastrophic fire will occur on either neighboring public lands or on their neighbors' property.

MITIGATING RISK ON FAMILY FORESTS

Whereas most family forest owners understand the risk they face, most have not taken any action to address the risk. This despite the fact that 80

[illegible]	"Definitely" Will	Already Have Done
Tend to stands (thin, limb up, prune, or remove underbrush)	26%	25%
Create defensible space around structures	23%	47%
Create or maintain fire breaks	14%	25%
Install a pond, water tank or other water source	8%	38%
Conduct a controlled burn	6%	5%

percent say they know what to do to address that risk. Family forest owners were asked to rank, on a scale from zero to 10, how much more they felt they could do to reduce fire risk on their lands. Only 8 percent responded with a zero—everything possible has been done to reduce risk. Similarly, only 5 percent responded with a 10, meaning significantly more could be done. With a mean response of 4.6, Western family forest owners appear to have an uneasy sense that they have things under control on their land.

When asked about specific actions they have taken, only one-quarter have taken steps to restore forest health by thinning stands or removing underbrush. Less than half (47 percent) said they have created defensible space around structures on their property. Only one in four landowners said they will "definitely" tend to their stands or create defensible space around structures in the next 12 months.

BARRIERS DESPITE MOTIVATION

Across acreage size, income level, age and duration of ownership, 70 percent of family forest owners were motivated to reduce risk on their lands because of a sense of responsibility as a landowner. In addition, 58 percent valued improving the overall health of the forest through their own management actions. Landowners who had more recently purchased their land identified firefighter safety and benefiting wildlife habitat as prime motivators to reduce fire risk.

More than half (54 percent) cite the high cost of management as an extremely or very serious barrier to taking action to restore forests and reduce the risk of fire; nearly 60 percent of owners who have owned their land 10 or fewer years, identified this a top concern. This pattern is reflected across income levels, from lower to upper income brackets. While financial assistance alone will not motivate all family forest owners to engage, it is still important. Only 14 percent of family forest landowners said that other barriers were too pressing.

In sum, family forest owners are leading stewards of the private and family land estate in the West. They understand the risk that they face and they believe they have the knowledge to act. Most critically, they are motivated in large part by a sense of duty for the management of their lands and overall forest health. These insights are essential to understanding the necessary changes in not only policy but also outreach efforts to connect family forest owners to the support and assistance they need.

Percentage of landowners identifying barriers to taking actions to reduce the risk of wildfire on their land.	Extremely/ Very Serious	Total Serious
High cost/cost of hiring additional workers or contractors	54%	77%
Neighboring/ nearby land not managing their own land, therefore my actions would not necessarily reduce risks to my property	23%	47%
Too much work/time	29%	63%
Amount of red tape or paper work	26%	48%
Inability to access portions of the property to take action	24%	52%
Disposing of trimmings and brush	20%	48%
Unsure of actions to take	13%	20%
Appearance of the property would be less appealing	5%	20%

Recommendations

Given the nature of the challenge before us, if we are to protect critical clean water supplies in the West by overcoming the barriers preventing forest restoration and fire risk reduction activities on private and family lands, a comprehensive set of actions, both public and private, are needed. The following strategies can help drive landscape scale efforts across ownership boundaries:

- Increase on-the-ground cross-boundary efforts to engage private and family landowners focused on delivering measurable risk reduction and forest restoration at scale.
- Improve policy and public funding to support on-the-ground action, including private and family lands.
- Catalyze markets that reduce the costs of wildfire risk reduction and forest restoration and make ongoing healthy forest management economical.

While there are a range of ways to achieve these strategies, we focus below on the opportunities we think offer the most near-term potential for progress on the ground.

Increase On-the-Ground Cross-Boundary Efforts to Engage Private and Family Landowners Focused on Delivering Measurable Risk Reduction and Forest Restoration at Scale

While there are a range of collaborative efforts under way across the West to address wildfire risk, most collaborative efforts are focused on public lands that, while necessary, are not by themselves sufficient as this report demonstrates. More on-the-ground efforts must incorporate private and family lands and include outreach to these landowners at a scale commiserate to the challenge. As this report's landowner survey notes, family forest owners, the largest segment of this private and family landownership, are ready to do the right thing and can act expeditiously, whereas public lands treatments often take significant time to plan and execute.

In addition to the need for increased cross-boundary work, there is also a need for increased effective and coordinated landowner outreach efforts that tie to cross-boundary efforts. There are a host of federal and state agencies, university extension services and national to local non-governmental organizations that are conducting outreach to private and family landowners. However, these efforts are often not coordinated and sometimes duplicative. The American Forest Foundation has tested a number of strategies in collaboration with multiple agencies and organizations for effectively engaging private and family landowners to deliver landscape-scale outcomes. Based on our

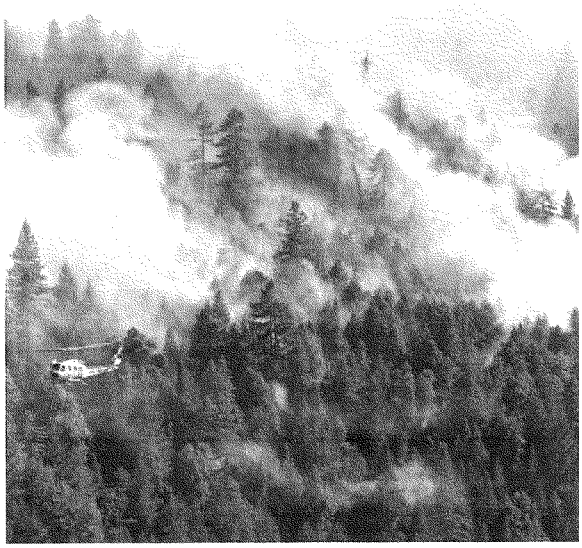
learning, grounded in 12 landscapes nationwide, we recommend an increased focus on the following:

- Identify shared landscape outcome(s) early to not only define meaningful and measurable results but also to stay focused.
- Leverage local collaborative capacity to coordinate and focus resources and avoid duplication.
- Develop initial marketing outreach that meets landowners where they are and on their terms.
- Follow up with landowners. Most forest management actions are not a simple, one-time activity but will require continuous and multiple steps, so follow up is essential to achieving the outcome.
- Develop and implement a tracking system for both outreach and landowner action in order to track progress towards outcome and enable timely follow up.
- Adapt strategies deliberately to enhance learning.

Improve Policy and Public Funding to Support On-the-Ground Action, Including Private and Family Lands

Public policy and public funding can have a tremendous impact on private lands. However, most wildfire related funding and policy has been directed at public lands.

As noted in this report's family forest owner survey, most owners cite cost as the primary barrier to

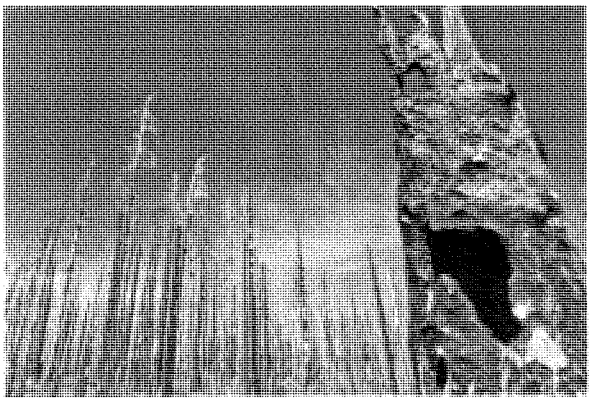


risk reduction and forest restoration efforts. These landowners aren't looking for a handout, most are willing to invest their own time and resources in managing their land, but often their time and money alone is not sufficient to reduce shared fire risk and to safeguard a public good like water supply.

Public funding invested in reducing wildfire threats will reduce wildfire fighting costs—a smart investment that will ultimately save money on the continuously growing cost of fighting wildfires. Private and family lands treatments are a smart investment that can be implemented immediately.

While there are a range of policy and funding solutions, both federal and state, that could be put in place, three near-term actions are needed:

- Fix How Wildfire Fighting Is Funded in the Federal Government: Currently, because of poor budgeting practices complicated by the increasing cost of wildfire fighting, public and private land risk reduction and restoration programs have seen shrinking budgets and funds "borrowed" to cover emergency wildfire fighting when funds have run out. This creates disruption and inefficiency in program implementation, delaying the urgent restoration action needed on the ground. Congressional action is needed to treat wildfire fighting, especially those costs that are truly catastrophic in



Many Western state forest action plans include emphasis on wildfire risk reduction and forest restoration on private and family lands. We encourage states to use their regular review processes to look for opportunities to prioritize efforts in landscapes where there is a threat to water supplies and there is potential for cross-boundary, collaborative, landscape efforts.

nature, like other federal disaster emergency funding.

- Create and Enhance Authorities and Funding to Stimulate Cross-Boundary Action on Private and Family Lands: While there are a number of authorities and funding sources at both the federal and state level aimed at collaborative efforts to reduce wildfire risk, few include a strong emphasis on cross-boundary action involving private and family landowners. Additionally, there are several landscape programs in the U.S. Forest Service and the U.S. Department of Agriculture's (USDA's) Natural Resource Conservation Service directed at state and private lands that could be strengthened to encourage cross-boundary efforts. We recommend a review of these authorities to strengthen the funding and policy support for action on private and family lands and cross-boundary action on wildfire mitigation, especially in important watersheds. We also encourage, where feasible, that these policies and funding sources support market-based utilization of materials.

In addition to these federal actions, a number of Western states in recent years have prioritized funding for private and family lands risk reduction and restoration that can be leveraged with federal funding. Local municipalities, water authorities and others have also begun to direct funds to mitigation efforts, as a means to reduce water treatment costs. We commend these efforts and encourage continued investment in this effective, immediate solution on private and family lands.

- Prioritize Cross-Boundary Activities in State Forest Action Plans: Catalyzed by the 2008 Farm Bill, states have produced Forest Action Plans to guide each state's forest priorities and funding from both federal and state sources.

Catalyze Markets That Reduce the Costs of Wildfire Risk Reduction and Forest Restoration and Make Ongoing Healthy Forest Management Economical

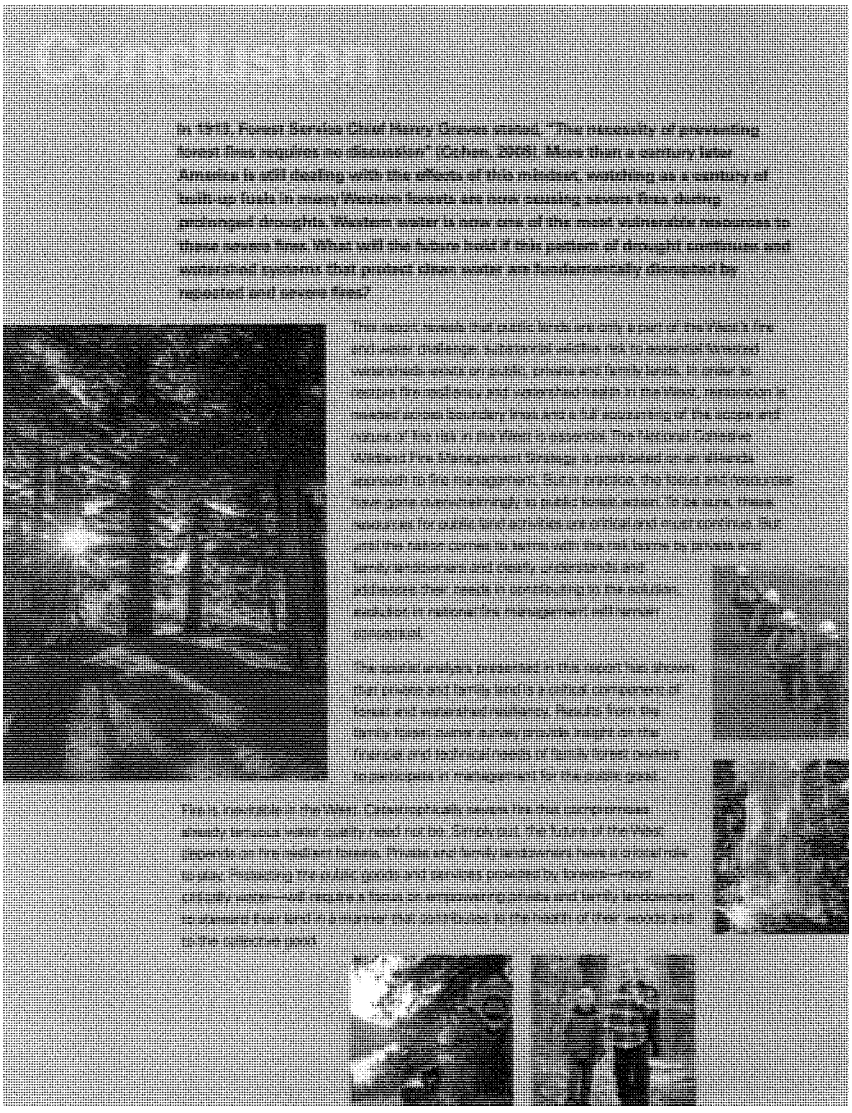
While public funding is crucial to addressing the cross-boundary wildfire risks in the West, it will be insufficient to address the problem in the long term and at the scale necessary to address the challenge. Given the largest barrier to family forest owner action is cost, markets that utilize the byproducts of treatments and defray the costs for private and family landowners are crucial to a scaled impact.

There are a number of ways to catalyze markets for the use of the byproducts of wildfire risk reduction and restoration treatments. Our review of the barriers to market development points to two high-priority approaches that can be implemented immediately, among a whole range of needed strategies:

- Social Capital Investment Solutions: Upfront investment cost is one of the largest barriers to developing

infrastructure not only to successfully conduct on-the-ground treatments but also to utilize those projects' byproducts. Technologies that utilize wildfire mitigation and restoration byproducts and make a whole range of products from energy to nanotechnology exist, but returns often take longer than traditional loan programs are willing to allow. Given the scale of the problem and the fact that there is a ready supply of raw material on private and family lands, private-sector investors looking for economic return while providing a societal good—reducing risk and safeguarding Western clean water supply—could establish social capital funds with low interest loans or other strategies to invest in businesses that build this infrastructure. If combined with other strategies, such as the private and family landowner engagement activities outlined above, access to raw material will not be an issue and expeditious implementation will be possible.

- **Focus Market Investment Where Private and Family Lands Can Supply Raw Material:** There are significant public-sector loan and grant programs in existence—from the USDA Rural Development programs to state programs—to invest in market infrastructure that will utilize wildfire risk reduction and restoration byproducts. However, many of these programs have focused investments in businesses that source their raw materials from public lands. We recommend focusing these programs on infrastructure investments where there is a mix of raw material from both public and private and family lands and where there is effective private and family landowner engagement to help deliver immediate, secure raw material.



Appendices

REFERENCES

"American Forest Foundation. "Wildfires and Climate Change." 2015 (July). Available at: https://www.forestfoundation.org/wildfires-and-climate-change.

Brunskill, A. 2013 (February 4). "Wildfires and the Impact on Water Quality." *University of Denver Water Law Review*. Available at: http://duwaterlawreview.com/wildfires-and-the-impact-on-water-quality.

Burakowski, E., and M. Magnusson. 2012 (December). "Climate Impacts on the Winter Tourism Economy in the United States." The Natural Resources Defense Council, Protect Our Winters. Available at: http://www.nrdc.org/globalwarming/files/climate-impacts-winter-tourism-report.pdf.

Butler, B. J. 2008. "Family Forest Owners of the United States, 2006." Gen. Tech. Rep. NRS-27. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 72 p.

Butler, B. J. and S. M. Butler. 2014 (October 10). "Wildfire and Family Forest Owners: A Literature Review." Family Forest Research Center, U.S. Department of Agriculture, Forest Service, University of Massachusetts, Amherst.

Climate Central. 2012 (September). "The Age of Western Wildfires." Available at: http://www.climatecentral.org/news/report-the-age-of-western-wildfires-14873.

Council of Western State Foresters. 2015. "Western Wildfire Risk Assessment." Available at: http://wflccenter.org/western-wildfire-risk-assessment.

Cohen, J. 2008. "The Wildland-Urban Interface Problem." *Forest History Today* Fall 2008:20-26. Available at: http://foresthistory.org/Publications/FHT/FHTFall2008/Cohen.pdf.

Dennis, N. 1989. "The Effects of Fire on Watersheds: A Summary." U.S. Department of Agriculture, Forest Service, Gen. Tech. Rep. PSW-109.

The Forest History Society. 2015 (July). "U.S. Forest Service Fire Suppression." Available at: http://www.foresthistory.org/ASPNET/Policy/Fire/Suppression/Suppression.aspx.

Forest Resources of the United States. 2007. Gen. Tech. Rep. WO-78. Washington, DC: U.S. Department of Agriculture, Forest Services, Washington Office. Available at: http://www.fs.fed.us/nrs/pubs/gtr/gtr¬_wo78.pdf.

Furniss, M. J., B. P. Staab, S. Hazelhurst, C. F. Clifton, K. B. Roby, B. L. Ilhardt, E. B. Larry, A. H. Todd, L. M. Reid, S. J. Hines, K. A. Bennett, C. H. Luce, and P. J. Edwards. 2010. Water, Climate Change, and Forests: Watershed Stewardship for a Changing Climate. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Available at: http://www.fs.fed.us/pnw/pubs/pnw_gtr812.pdf.

Glick, D. 2011. "The Perfect Firestorm." *Audubon* July/August. Available at: https://www.audubon.org/magazine/july-august-2011/the-perfect-firestorm.

Hewes, J. H., B. J. Butler, G. C. Liknes, M. D. Nelson, and S. A. Snyder. 2014. Public and Private Forest Ownership in the Conterminous United States: Distribution of Six Ownership Types—Geospatial Dataset. Fort Collins, CO: Forest Service Research Data Archive.

Ice, G. G., D. G. Neary, and P.W. Adams. 2004. "Effects of Wildfire on Soils and Watershed Processes." *Journal of Forestry* 102(6):16-20.

Matlock, S. 2011 (August 22). "Flooding Tests Preparation in Santa Fe, Las Conchas Burn Scar Area." *The Santa Fe New Mexican*.

Maupin, M. A., J. F. Kenny, S. S. Hutson, J. K. Lovelace, N. L. Barber, and K. S. Linsey. 2014. Estimated Use of Water in the United States in 2010: U.S. Geological Survey Circular 1405, 56 p. Available at: http://pubs.usgs.gov/circ/1405.

Meixner, T. 2004. "Wildfire Impacts on Water Quality." *Southwest Hydrology* September-October:P24-P25.

Morin, M. 2015 (September 14). "Sierra Nevada Snowpack Is Much Worse Than Thought: A 500-Year Low." *The Los Angeles Times*.

New Mexico Environment Department. 2015 (July). "Wildfire Impacts on Surface Water Quality." Env.NM.Gov. Available at: https://www.env.nm.gov/swqb/Wildfire/index.html.

Park, H., D. Cave, and W. Andrews. 2015 (July 15). "After Years of Drought, Wildfires Rage in California." *The New York Times*.

Pelz, K. 2015 (March). "Quantifying Fire Threats to Forest Values on Private Lands: Distribution of High Fire Risk on Non-Federal Forests in the West." American Forest Foundation.

Pinchot, G. 1899. "The Relation of Forests and Forest Fires." *National Geographic* Volume X.

State of the Rockies Report and Conservation in the West Annual Survey, Colorado College, 2015. https://www.coloradocollege.edu/other/stateoftherockies.

Statement from the Partner Caucus on Fire Suppression Funding Solutions. 2015 (January 22). "Senate Introduces the Bipartisan Wildfire Disaster Funding Act." Available at: http://www.nature.org/newsfeatures/pressreleases/senate-introduces-bipartisan-wildfire-disaster-funding-act.xml.

Tolme, P. 2013 (July 29). "Wildlife Feels the Heat." *National Wildlife*. Available at: https://www.nwf.org/News-and-Magazines/National-Wildlife/Animals/Archives/2013/Wildlife-Feels-the-Heat.aspx.

Turkewitz, J. 2015 (July 9). "Dark Cloud Lifts Over Denver, But Experts Warn of More to Come." *The New York Times*.

U.S. Forest Service. 2015 (August 4). "The Rising Cost of Wildfire Operations: Effects on the Forest Service's Non-Fire Work." Available at: http://www.fs.fed.us/sites/default/files/2015-Fire-Budget-Report.pdf.

U.S. Geological Survey. 2013 (October 25). "Wildfire." Available at: https://water.usgs.gov/owq/topics/wildfire/wildfire-briefingsheet.pdf.

Western Forestry Leadership Coalition. 2010 (April). "The True Cost of Wildfire in the Western U.S." Available at: http://www.wflccenter.org/news_pdf/324_pdf.pdf.

Wright, M. 2015 (July 25). "Santa Clara Strives to Build Resilience to Fires, Floods." *The Santa Fe New Mexican*.

Writer, J. H., and S. F. Murphy. 2012 (July). "Wildfire Effects on Source-Water Quality: Lessons from Fourmile Canyon Fire, Colorado, and Implications for Drinking Water Treatment." U.S. Geological Survey. Fact Sheet 2012-3095, 4 p. Available at: http://pubs.usgs.gov/fs/2012/3095/FS12-3095.pdf.

Spatial Data and Methods

GENERAL METHODOLOGY

The analysis identified areas where high fire threat overlay areas of high importance value in terms of water supply. The analysis ran a set of pixel-level queries on the data layers, all of which are described in the section below. High fire threat areas were determined by querying for pixels above a minimum threshold value from the Western Wildfire Risk Assessment's Fire Threat Index layer, described, along with all other data inputs, under the section "Data Layers Used" below. Water supply importance was based on querying for pixels above a minimum threshold value from the Drinking Water Importance Areas layer. Fire threat and water supply importance required establishment of minimum threshold values. These are described below under the section "Description of Cutoff Values."

Ownership data were then taken from the Council of Western State Foresters' Western Wildfire Risk Assessment database, in turn based on GAP analysis data, to extract only those pixels in private land. The result allowed us to map areas of no fire threat, fire threat and no relevant values and fire threat and water importance value. This was done for each state separately. Within each state, this analysis was done for all lands and for all private and family lands.

DATA LAYERS USED

Regionally-Leveled Fire threat index (FTI)

Source: Western Wildfire Risk Assessment (WWA) data set

Data model: 30-meter pixels, tiled by state

Description from WWA: "The Fire Threat Index (FTI) is a value greater than 0.0 and less than or equal to 1.0. It was developed consistent with the mathematical calculation process for determining the probability of an acre burning. The FTI integrates the probability of an acre igniting and the expected final fire size based on the rate of spread in four weather percentile categories into a single measure of wildland fire susceptibility. Due to some necessary assumptions, mainly fuel homogeneity, it is not the true probability. But since all areas of the project have this value determined consistently, it allows for comparison and ordination of areas of the state as to the likelihood of an acre burning."

Drinking Water Importance Areas: Lower 15 States

Source: Western Wildfire Risk Assessment (WWA) data set

Data model: 30-meter pixels, tiled by state. It is a rasterized version of a vector watershed layer, with the pixel value representing the importance value on a scale from 1 to 10.

Description from WWA: "This Drinking Water Importance Areas layer identifies an index of surface drinking water importance, reflecting a measure of water quality and quantity, characterized by Hydrologic Unit Code 12 (HUC 12) watersheds. The Hydrologic Unit system is a standardized watershed classification system developed by USGS [U.S. Geological Society]. Areas that are a source of drinking water are of critical importance and adverse effects from fire are a key concern. The U.S. Forest Service Forests to Faucets (F2F) project is the primary source of the drinking water data set. This project used GIS [geographic information system] modeling to develop an index of importance for supplying drinking water using HUC 12 watersheds as the spatial resolution. Watersheds are ranked from 1 to 100 reflecting relative level of importance, with 100 being the most important and 1 the least important. Several criteria were used in the F2F project to derive the importance rating including water supply, flow analysis, and downstream drinking water demand. The final model of surface drinking water importance used in the F2F project combines the drinking water protection model, capturing the flow of water and water demand, with a model of mean annual water supply. The values generated by the drinking water protection model are simply multiplied by the results of the model of mean annual water supply to create the final surface drinking water importance index. Watersheds are ranked from 1 to 10 reflecting relative level of importance, with 10 being the most important and 1 the least important."

Ownership

Source: Western Wildfire Risk Assessment (WWA) data set

Data model: Vector data tiled by staterasterized version of a vector watershed layer, with the pixel value representing the importance value on a scale from 1 to 10.

Description from WWA: "This GIS-based dataset was created to help people integrate protected areas data into their daily work (e.g. mapping, planning, analyses, and problem-solving). For example, this database makes it easy for users to address important conservation and resource questions pertaining to climate change adaptation, green energy development, infrastructure planning, and wildlife connectivity. State and regional planners and managers will appreciate this dataset as it provides critical contextual information for their work. Institutions responsible for national and international reporting will find this database full of reliable, accurate information for their purposes. The scientific and conservation community will also benefit from having this standardized base map to carry out their research and planning objectives."

Source: Public and private forest ownership in the conterminous United States, U.S. Forest Servicedata set

Data model: 280m raster data

Description from Developer: "This data product contains raster data depicting the spatial distribution of forest ownership types in the conterminous United States circa 2009. The data are a modeled representation of forest land by ownership type, and include three types of public ownership: federal, state, and local, as well as three types of private: family (includes individuals and families), corporate, and other private (includes conservation and natural resource organizations, unincorporated partnerships and associations." For purposes of this report, which is focused on private and family land owned lands, Native American tribal lands, while distinct from public lands, are accounted for in tables and maps as part of the public land acreage. This ensures that their acreages are accounted for but not confused with the focus of this report.

DESCRIPTION OF CUTOFF VALUES

FTI

For FTI, we hoped to find a critical threshold value of FTI that would yield the same distribution of pixels designated as "high" or "very high" threat categories as the Wildfire Hazard Potential (WHP) product, which is the only major nationwide fire mapping product that makes such a characterization. An analysis of WHP indicated that 20 percent of its total pixels and 23 percent of its non-water, non-inflammable pixels are listed as "high" or "very high" fire hazard. We decided to choose a threshold value of FTI that would yield the latter percentage designated as high threat. The latter was used because the FTI layer leaves water and many non-flammable pixels as blank. It was impossible to get an exact cutoff value of FTI that yielded 23 percent of the pixels designated because of the large number of runs of identical values. However, we were able to get close. A cutoff value of 0.004 FTI using the regionally leveled FTI data yielded a designation of 22.7 percent of pixels above the cutoff, which was deemed sufficiently close. An Arc Model was developed that automated the creation of the 1/0 fire threat query raster layers by state using a raster iterator.

Water

It was decided to choose a cutoff that would yield the top 20% of watersheds in terms of their importance value. The WWA water importance product (DWIA) ranks watersheds form 1-10 based on importance to water supply, with 10 being greatest. We compared the WWA product to the Forest to Faucets (F2F) product from which it was derived. As described above, the F2F data set has a score going from 1-100 where each increment represents one percentile (one hundredth) of the population of watersheds. We determined that the WWA product essentially converts the F2F's 1-100 quantile-based score of watershed importance to a 1-10

decile based scored (although methods of rounding remain unclear). From our analysis of F2F and DWIA data (which was complicated by the fact that F2F is vector and DWIA is raster), it appeared that the WWA defined quantiles based not on a west-wide but on the original nationwide data set of watersheds That is, if a watershed had a score of 95, it meant that it was in the top decile of all watersheds in the country, in terms of importance, not just the top decile of watersheds from the western states. However, because the distribution of high-importance watersheds is skewed to the eastern US, that means that the decile rankings do not represent the distribution of watershed scores in the west alone and that they tend to be lower than they would otherwise be if the deciles were based only on the western population of watersheds. Therefore, we needed to determine which cutoff value of the DWIA score would correspond approximately to the upper 20th percentile of data only for the eleven western states. Our analysis indicated that for the western states, using a cutoff of 6 would get us the closest to the desired 20% population share, so this was used. An Arc Model was developed that automated the creation of the 1/0 fire water supply importance layers by state using a raster iterator.

Masking by Ownership

Once the 1/0 state-level maps had been created for FTI and water, the next step was to mask out just private lands on a state-by-state basis. The following categories were used in attribute query to select for private lands: private land, private conservation land, corporate land and tribal land. Once the selection was made for each state, just the selected polygons were exported to a new layer for that state. The two output maps (FTI, fire+water) were then masked out to private and family lands using the "extract by mask" function with an Arc Model Builder batch function.

Summarizing Data by Watershed

All of the main binary outputs (FTI, FTI+water) were then summarized by vector watershed using the mean value of pixels within that watershed. This was done by first using zonal statistics using a raster iterator in Model Builder. The output of this step was a zonal table for each state and for each output (11*3) that gave the HUC code in one column and the mean of the value in question in another. To populate a given mean value field in the HUC layer from the input tables, 11 joins and field calculations had to be done, because the pixel values resided in state-level layers. This was done using a tabular iterator in Model Builder that first added a join, then did a field calculation using a python script to ensure that only rows with null values in the target cells would be calculated, then removed the join, before going on to the next table in the workspace.

This model was run once for each of the three binary raster outputs described above. This was done for the combined private and public coverage layers, because a mean value for just private land in a HUC could be misleading if, for instance, only a tiny percentage of the HUC was occupied by private land. Rather, we decided we would distinguish between private and public land at this coarser scale by identifying which HUCs were predominantly public and which were predominantly private. This was done by adding a field to each private land layer, with all values set to 1, then converting that to raster, then reclassifying the raster to set "no data" to zero and then using zonal statistics to summarize the mean pixel value by HUC. That value could then be interpreted as a percentage. This series of operations was done using a combination of feature class, raster and table iterators in Model Builder. The result was that we could now easily identify which HUCs were greater than 50 percent private. This allowed us to create codes to be used in color coding output maps that would, for instance, differentiate between high FTI/high water importance HUCs with mostly public versus with mostly private land.

QUESTIONS AND ANSWERS

NOVEMBER 5, 2015

Senate Committee on Agriculture, Nutrition, & Forestry
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands
Thursday, November 5, 2015
Questions for the Record
Mr. Dan Dessecker

Chairman Pat Roberts

1. Would fixing only the fire funding problem provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives?

   Fixing the fire funding would certainly aid the Forest Service in meeting forest plan objectives. However, a categorical exclusion designed to expedite the implementation of projects designed to provide young forest wildlife habitats (early successional) would be both a cost-saving measure for the agency and a useful tool to help diversify wildlife habitats on our national forests.

2. What should be our priority goals for active forest management on National forests? Should it be fuels reduction, clean water, fish and wildlife habitats, timber production for local mills, some, or all of those goals?

   All of the above as these goals are all inter related, they are not mutually exclusive.

Senator Debbie Stabenow

1. Mr. Dessecker, I agree with your emphasis on the importance of meeting plan goals for young forest habitats across our National Forests in the East. We sent a letter to Secretary Vilsack earlier this year asking the agency to redouble their efforts in this space. Can you please share with the Committee exactly why these types of habitats are so important to the wildlife your organization cares about? And are we right to

assume that freeing up more resources in the Forest Service budget would help some of our forest supervisors meet these planning goals?

Young forest habitats are critically important to a host of game and nongame wildlife species. These species include the federally endangered Kirtland's warbler in Michigan, as well as game species, such as the ruffed grouse, American woodcock, elk and white-tailed deer. The hunting opportunity afforded by robust populations of game wildlife is a foundation of the economies of many rural communities in Michigan and elsewhere across the nation. Enhanced personnel and financial resources for the Forest Service would definitely help national forests meet wildlife habitat and other forest plan objectives.

Senate Committee on Agriculture, Nutrition, & Forestry
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands
Thursday, November 5, 2015
Questions for the Record
Mr. William R. Dougan

Chairman Pat Roberts

1. Would fixing only the fire funding problem provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives?

Fixing just the fire funding problem will not provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives. Increasing the fire suppression funding will certainly help address the agency's ability to pay for wildfire suppression costs for wildfires that escape initial attack and rapidly increase in size to become the large, catastrophic wildfires that rapidly drain the suppression budget. But I would argue that the strategy for reducing the number and size of catastrophic wildfires must be holistic in nature and must contain an aggressive plan for minimizing the risk of wildfires that escape initial containment and become the 1-2% of fires that consume 30% or more of the suppression budget to contain and control. This must be accomplished through active forest management – reducing the buildup of ground fuels through piling and burning, thinning of the forest to remove dead and dying trees and reduce the risks of crown fires, and ensuring there is a mosaic of forest stages (from clearcuts to fully stocked mature stands) across the landscape. In forests where the tree species are fire-adapted, we must also reintroduce fire into those systems through understory burning on a periodic basis, to encourage regeneration as well as to keep the understory from becoming overgrown and unhealthy.

2. What should be our priority goals for active forest management on National forests? Should it be fuels reduction, clean water, fish and wildlife habitats, timber production for local mills, some, or all of those goals?

I believe overall, the goals for forest management on National forests should be to produce a mix of goods and services for the American people. The notion that we can, and should, praduce "all things on every acre" has not served the forests and the public well. We should look at those parts of the landscape that have the greatest ability to produce timber products, and intensively manage those lands for timber, while also ensuring that we provide adequate wildlife corridors, pratect streams for water quality and fish, etc. Those parts of the forested landscape that are nat capable of praducing high timber values should be managed for other values, such as recreation, wildlife and fish, where that makes sense. We need to expand our vision and thinking to the landscape level and manage our lands on that level. Creating and managing for a variety of forest conditions across the landscape will also help reduce wildfire occurrence and severity. An unbroken, monotonous old-growth forest canopy is a recipe far crawn fires if a wildfire escapes initial containment; a variety of forest conditions will ensure that fires will have much less capability to roll across thousands of acres unimpeded.

3. The safety of personnel on the front line fighting wildfire is a critically important component in forest management. In addition to the needed resources, can you elaborate further on how active management, hazardous fuels reductions, and preventive forest management are an important aspect in the broader policy discussion regarding wildfire prevention and mitigating risk for firefighters?

Firefighting is a dangeraus business. Reducing the hazardous fuels on the forest landscape will have a positive impact on reducing the number of wildfires that escape initial attack, as well as help with reducing the rate of spread and intensity of those fires that do escape initial containment. Hazardous fuel reduction can be accomplished through active forest management (removing dead and dying trees, using prescribed fire to burn the understory and reduce ground fuels, thinning the forest overstory and understory to lessen the chance of crown fires and provide for healthier trees). One of the major risks for firefighters is being overrun by fire; this risk can be lessened by breaking up the continuity of forest fuels, resulting in fire moving

more slowly. Untreated ground fuels also make it more difficult for firefighters to walk through the forest, and would create very hazardous conditions if firefighters were forced to quickly escape from an approaching wildfire.

Senator Amy Klobuchar

1. In Minnesota alone, Forest Service budget transfers this year placed significant strains on projects and human resources. Over Labor Day weekend, the Chippewa National Forest had to send key staff members to fight wildfires which resulted in less customer service and project support during an important time for recreation activity. How has fire command personnel training and deployment had to evolve to handle the increased workload?

During heavy fire years, the sheer number as well as he size of wildfires puts considerable strain on the ability of the firefighting agencies to be able to field sufficient forces to combat these wildfires. The deployment of firefighters beyond their local jurisdictional boundaries is controlled and coordinated through the National Incident Coordination Center (NICC), which evaluates the many competing needs for firefighting forces across the country, and prioritizes the deployment of those resources based on current and projected wildfire activity and severity. Firefighting resources are often "pre-positioned" in geographic locations which are predicted to receive increasing wildfire activity and fire starts due to weather conditions (thunderstorms, high winds, dry conditions, etc.); this makes it more likely that sufficient forces will be close by to be successful in initially containing new fires that get started. NICC is also a critical resource for redirecting firefighting resources from one fire to another, as fires become contained and controlled, demanding fewer resources on those particular fires.

Training of wildfire personnel has also evolved to handle the increased wildfire workload. We are seeing a lot of firefighters become qualified for several different types of positions – for example, during my years as a wildland firefighter, I was

simultoneously qualified as an incident commander, crew boss (qualified to lead a 20-person firefighting crew), incident medical specialist (EMT with special training for wildfire injuries), medical unit leader and ground support unit leader. By having personnel with multiple qualifications, it makes it easier for critical needs to be filled more quickly. If I was performing work on a wildfire as a crew boss, and the time came for my crew to be released from that fire, I could be deployed to another wildfire that had a need for an incident medical specialist, for example, quickly filling that need. Having all of the qualifications of wildfire personnel available to NICC, it makes it much easier to efficiently dispatch resources where they are most needed. It also makes it easier to track critical resource shortages and to look to already-dispatched firefighters possessing those skills to fill those critical positions.

Senate Committee on Agriculture, Nutrition, & Forestry
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands
Thursday, November 5, 2015
Questions for the Record
Mr. Ken Stewart

Chairman Pat Roberts

1. Would fixing only the fire funding problem provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives?

Fixing the fire funding problem, similar to the approach taken in the Wildfire Disaster Funding Act would address a significant barrier in the way of USFS accomplishing land management goals on both public and private land. AFF believes a fix should address both the "borrowing problem" as well as the ongoing erosion of the USFS budget caused by rising annual wildfire fighting costs in a limited budget. Funding the largest catastrophic wildfires, similar to other natural disasters will allow the agency to move forward on other critical mission related activities such as land treatments that will reduce the risk of catastrophic wildfire.

From AFF's perspective, representing and working with the nation's 22 million family woodland owners, who own more than one-third of the nation's forests, fixing this fire funding issue will also help the USFS address major private lands issues--such as the growing wildfire risk on private and family lands in the West. AFF's new report, Western Water Threatened by Wildfire: It's Not Just a Public Lands Issue, included in the hearing record, identifies some 30% of the high fire risk lands in the West are private and family lands, making it essential that the USFS can provide support to help address this growing threat. The report also found that when it comes to protecting drinking water in the West, an already scarce resource, some 40% of the lands that filter the wests more important water supplies and have high fire threat, are private and family lands. AFF's report also found that the second largest barrier keeping family landowners from implementing wildfire treatments is the worry that their neighbors won't take action, making their work futile in addressing the fire threat. Public lands, including the large portion of USFS lands, are one of the most significant "neighbors" to family landowners in the West, so public lands inaction means less action on private lands as well.

While the fire funding fix will not solve all these issues completely, it will go a long way towards getting the USFS and their private land neighbors working to address the growing wildfire threats and other challenges threatening our forests and the clean water and air, wildlife habitat, wood supplies, and other benefits we all rely on.

2. What should be our priority goals for active forest management on National forests? Should it be fuels reduction, clean water, fish and wildlife habitats, timber production for local mills, some, or all of those goals?

AFF focuses on family woodlands in the U.S., so we do not have a position on priorities for National Forests, as all the goals mentioned above are important, depending on where the forest is located and the community and ecological context. However, we do strongly believe, based on our long history of working on private lands--almost 75 years of action--that once outcomes are determined, a landscape approach is critical to achieving most of the goals mentioned above--an approach that involves all landowners in a geography and works across ownership boundaries. For example, wildfires don't respect ownership boundaries. If we seek to reduce wildfire threats to homes, communities, water supplies, a cross-boundary strategy that seeks to reduce fire risk in the broad landscape, is essential. So while we may not be able to choose priorities, we believe that a landscape approach, involving private landowners is essential to achieve a range of priorities.

3. The report referenced in your testimony highlights the need for private and family landowners to be part of the solution to address wildfire threats in the West. The testimony mentions the need for new and enhanced authorities to encourage a landscape scale approach on public and private land to mitigate wildfire risk. Can you give any examples of what an inclusive legislative solution might look like addressing the above?

As mentioned above, to truly address wildfire threats to water supplies, as well as other critical forest benefits, communities, and homes, a landscape scale approach is needed, that involves both public and private lands in a landscape. Most programs, funding, and direction provided to

the USFS are siloed by ownership--one set focuses on national forests, another set focuses on state and private forests, but there are few programs and little funding that encourages work across ownerships. Additionally, most policies are directed at individual parcels, tracts, or national forests, but don't encourage a look across the forested landscape. Lastly, most programs are focused on delivering a certain practice, be it a management plan or tree planting assistance, but few require an outcome-based approach that ensures the programs are truly achieving measurable outcomes like cleaner water, increased wildlife, or more sustainable wood supplies.

There are several programs that have the potential to do more with tweaks and strong funding support. The USFS Landscape Scale Restoration Program, a new line item built out of the 2008 and 2014 Farm bills, provides resources and direction for landscape approaches, encourages focus on measurable outcomes in a landscape, and allows work on both state and private lands. More can be done to support this Program and encourage its focus on high priority outcomes at both the national and state level.

Other programs, such as the Collaborative Forest Landscape Restoration Program, encourage collaboration but could be strengthened to include a stronger focus on private lands, in addition to public lands.

Lastly, NRCS, which provides financial support to private landowners for management actions such as hazardous fuels management, could also do more to align resources its spending on wildfire mitigation (as well as other outcomes) with work the USFS and other agencies at the federal and state level are doing. Focusing in key watersheds to protect water supplies and mitigate fire risk for example, with both USFS, NRCS, and other federal and state funding, will ensure that funding resources are effectively used to address the problem, versus a scattershot approach that has minimal chance of success. Additionally, a stronger focus on measurable outcomes could also strengthen these programs.

These are just a few examples of program what we believe should be included in a comprehensive package that address wildfire as well as other forest issues.

Senate Committee on Agriculture, Nutrition, & Forestry
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands
Thursday, November 5, 2015 hearing

Questions for the Record
of **Mr. Chris Treese**

Chairman Pat Roberts

1. **Would fixing only the fire funding problem provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives?**

In a word, no. It certainly would help, but it is only one part of a larger solution. Providing sufficient funding for fire suppression, fire prevention, and, regrettably, fire mitigation is all critically important. Equally important, however, is ensuring that the Forest Service has the other tools necessary to fulfill its multiple-use mission.

Reducing the ever growing fire threats is essential to stopping the exponential growth in costs. The unsustainable practice of fire borrowing will continue to derail Forest Service management in future budgets unless addressed and corrected.

In addition to adequate fire-related funding, Congress should address the delays inherent in permitting, including the almost inevitable administrative appeals and legal objections to timber-related activities. Whether the permitting in question is for a timber sale of a healthy forest, an over-grown forest in need of thinning, or a salvage sale of fire damaged or blow-down trees, timely removal/recovery of timber is critical to both its commercial value as well as to its environmental benefits.

Additionally, a long-term federal plan for forest health and a companion commitment to at least a sustainable level of timber harvesting is essential to maintaining a viable commercial timber industry. Colorado has essentially lost its entire timber industry because of an unreliable supply of timber from federal lands. As such, the Forest Service has lost an important partner and essential tool in planning for healthy forests.

That said, I don't suggest that legislative nor administrative initiatives addressing any one of these critical areas of concern should languish in favor of a comprehensive package of reforms. Progress on one front is preferable to no progress. However, we are hopeful that Congress will seize the opportunity to address both funding and permitting challenges. Further, we encourage pursuit of this effort with urgency.

2. **What should be our priority goals for active forest management on National forests? Should it be fuels reduction, clean water, fish and wildlife habitats, timber production for local mills, some, or all of those goals?**

The easy answer is, "all the above." However, consistent investment in fuels reduction alone would yield returns in clean water, improved habitat, and a viable timber industry. Healthy forests fulfilling the multiple use mandate of the Multiple Use and Sustained-Yield Act of 1960 should be the national goal.

3. **Colorado was largely spared this fire season, but in recent years, the state has experienced some very large fires. Can you describe the threats water managers see on the horizon and what that means for the water users you serve? Wildfire also poses a threat to infrastructure. Can you elaborate on the immediate and long-term impacts for both agricultural and municipal water users should this investment be destroyed?**

As noted, Colorado was largely spared the devastating wildfires of other areas of the West this year. Unfortunately, that has not been our recent history. Over the past 15 years, Colorado has far too much experience with wildfires that severely impacted our water supplies and water users' infrastructure.

Wildfire's impact to infrastructure does not discriminate among the different types of water users. Municipal, industrial, recreational, environmental, and agricultural water users have all been severely affected by wildfire, both by the immediate loss of infrastructure and the greater, post-fire impact of severely degraded water quality. Rain events after catastrophic wildfires cause high turbidity, increase in organics, and changes in chemical composition of water, such as higher levels of manganese and other heavy metals, all requiring higher treatment plant chemical use and result in reduced capacity. In peak use season, water providers might not be able to meet customers' water demand. To mitigate, water providers potentially would have to build very expensive water bypass facilities and additional water treatment facilities. Streams and rivers that become more solid than liquid adversely threaten not only infrastructure but the operability and operating costs of that infrastructure.

If the U.S. Forest Service continues to reduce funding for forest treatments there is a near certainty for large increases in sedimentation and debris flows resulting from wildfires that would cause loss of reservoir storage capacity in addition to threatening the safe operation of diversion inlet and reservoir outlet facilities.

As just one example, summer rains following a massive wildfire in the watershed that feeds Denver Water's Strontia Springs Reservoir washed more than one million cubic yards of ash and debris into the reservoir. This significant inflow of solids filled the reservoir to seven percent of its capacity, requiring Denver Water to spend more than $16 million on reservoir dredging that ultimately proved only marginally successful in restoring the reservoir's original capacity.

Water users in Colorado have come together to assess the risk of wildfire to watersheds. Municipal, industrial and agricultural water users have collaborated on triaging their shared watersheds in preparation for continued wildfire exposure. The clearest conclusion from these

risk assessments is prevention and planning represents the greatest return on investment. Replacement and recovery of lost infrastructure is too often impossible or cost prohibitive.

Senator Debbie Stabenow

1. **Mr. Treese, I was glad to hear you reference the 2014 Farm Bill's Regional Conservation Partnership Program (RCPP) in your remarks. While some might not think about these types of conservation efforts in the context of wildfire, it's true that RCPP and other initiatives help private landowners restore and enhance the health of their lands and waters – including forested lands. As you've been very involved with RCPP in your region, can you give the Committee some thoughts on how the program is being implemented so far and possible suggestions for improvement as we move forward?**

We are excited about the Regional Conservation Partnership Program (RCPP) and applaud the Committee for its authorization in the 2014 Farm Bill. It has already created new partnerships and collaborative opportunities in our communities.

The Colorado River District's 'Lower Gunnison Project' was selected as one of the inaugural RCPP grants to implement an integrated program to increase agricultural water use efficiency in that sub-basin of the Colorado River. The anticipated benefits are both water savings and improved water quality. Along with NRCS, we are learning the ropes of this new program. However, it has not been without some frustration.

We recognize that we are asking new questions of a new program, as well as for the ability to use NRCS funding in new ways. We believe there is great potential for and attendant benefit from improved coordination among our federal partners. In particular, we believe better coordination between Interior and Agriculture agencies and greater flexibility concerning funding would greatly improve implementation of our program, help fulfill Congressional intent, and result in a streamlined process instructive for future grant awardee. I would be happy to discuss this further and offer serve as a resource to the Ranking Member and the Committee regarding our experience with this worthy program.

Senate Committee on Agriculture, Nutrition, & Forestry
Wildfire: Stakeholder Perspectives on Budgetary Impacts and Threats to Natural Resources on Federal, State and Private Lands
Thursday, November 5, 2015
Questions for the Record
Mr. Chris Wood

Chairman Pat Roberts

1. **Would fixing only the fire funding problem provide the Forest Service with all of the tools needed to address wildfire and meet forest plan objectives?**

Fixing the fire funding problem via passage of the Wildfire Disaster Funding Act would substantially improve the Forest Service's ability to address wildfires and meet other critical forest plan objectives that are important to Trout Unlimited, such as watershed health and fisheries habitat restoration. Additional steps would help as well, including aggressive use of Stewardship Contracting, full use of the Collaborative Forest Stewardship Program, and effective use of the processes established under the 2014 Farm Bill Forestry Provisions. As I stated in my testimony, TU could support further additional measures to improve the pace of restoration on Forest Service lands, as long as those measures: 1. Would lead to improved watershed health on National Forests, 2. Improve collaborative processes to increase stakeholder involvement and support for Forest Service decisions, and 3. Increase the pace of fisheries habitat restoration to sustain valuable salmon and trout fisheries on the National Forests.

2. **What should be our priority goals for active forest management on National forests? Should it be fuels reduction, clean water, fish and wildlife habitats, timber production for local mills, some, or all of those goals?**

Trout Unlimited has long supported the multiple use, sustained yield mandates that direct management on much of our National Forests, benefitting all of the values contained in Question 2. Our overarching priority is to conduct forest management activities that maintain and improve the health of the land, especially the health of watersheds. We view provision of

clean water sources and healthy fish and wildlife habitats as very high priorities for the forest management. While there are some healthy watersheds on our National Forests, there are many that have been degraded by poor management activities in the past, such as the poorly maintained road system which continues to bleed habitat destroying sediment into streams and rivers and contains numerous inadequately designed culverts which block migratory fish passage. As Congress considers fire management legislation, we want to make sure that Congress remembers that there are other very pressing priorities on the National Forests.

3. **Your organization advocates for an end to fire borrowing and endorses the Wildfire Disaster Funding Act. This Committee did not receive a referral on the Wildfire Disaster Funding Act. However, H.R. 2647 has been referred to this Committee and the legislation has a slightly different funding mechanism, as well as a host of streamlining reforms for the Forest Service. What, if any, comments can your organization provide regarding the fire funding mechanism included in H.R. 2647? Would it be as effective as the one in the Wildfire Disaster Funding Act? Why or why not?**

In our review of HR 2647, we see a number of relatively small, and some potentially useful funding items, but we see no direct parallel to WDFA. It is a significant flaw of HR 2647. Passage of WDFA will benefit all of the resource priorities highlighted in Question 2, including wildfire management.

4. **Can you comment on the other provisions in H.R. 2647? In particular, could your organization support some version that:**
   - **streamlined NEPA for collaboratively developed projects;**
   - **targeted categorical exclusions for certain forest management projects; and**
   - **Provided additional funding sources for Stewardship projects, including a state supported fund and use of retained receipts for additional NEPA?**

My response to your very apt Question 1 also will be the basis of our response to this question. We are open to new legislative action if it fulfills the concepts we describe in our Question 1 response, in terms of maintaining and improving the watershed health, 2. Promoting

collaboration, and 3. Increasing the pace of fisheries and aquatic habitat restoration. Therefore, our biggest concerns with HR 2647 are the following: 1. No meaningful solution to the fire borrowing problem; 2. CEs which are too large for what we believe would be adequate for getting the restoration job done without creating new risks of fish habitat loss (such as increased sediment in streams); and 3. Not enough focus on other equally needed forms of forest restoration, such as road decommissioning, culvert replacement, and riparian restoration.

5. **Are there specific limitations that Trout Unlimited would like to see on provision such the above?**

We offer the committee the guidance contained in our testimony and answers to these questions. We do not have other specific limitations at this time.

Senator Debbie Stabenow

1. **Mr. Wood, I share your support for the bipartisan Wildfire Disaster Funding Act. As you know, a portion of the legislation would stop the fire transfer problem and this bill would also address a more systemic problem which is that the Forest Service is spending more on wildfire than ever before. Can you talk about some of the basic Forest Service functions and programs that are suffering because the agency is forced to spend so much of their budget on wildfire suppression?**

I want to emphasize a point I made on page 4 of my testimony:

> {Nationally, over the last 10 years fire funding as a part of the Forest Service budget has grown, there has been a continuing reduction in technical staff in the agency with positions not being backfilled due to retirement or departure. So much of the regular budget is dedicated to fire related work that funding for road maintenance and fish passage projects have seen a dramatic drop off in recent years. Road and fish passage projects have dropped from approximately 250 a few years ago to 40 nationwide last year, and that number may be reduced by half next year. Watershed restoration projects were reduced by 35% last year alone.}

Trout Unlimited, other watershed group partners, and our state fish and wildlife agency partners, are disturbed by the loss of funding and technical capacity of the agency. This reduction is caused both by fire borrowing and direct lack of funds provided by Congress over the course of the last 10-15 years. This trend must be reversed to enable the Forest Service to work effectively with its partners to sustain water, fish and wildlife resource on our National Forests. That is why passage of WDFA is a high priority for us.

2. **Mr. Wood, during past hearings in this Committee we've heard that the practice of using prescribed burns can a big difference in making our forests more resilient to catastrophic wildfire. Can you talk from your experience about why prescribed burns, an authority that the Forest Service already has, are such an important tool?**

As I tried to stress in my testimony, our National Forests are fire dependent systems. It's an overlooked fact: the healthy National Forests that we all aspire to help create **must** have periodic wildfires as an essential management element. Therefore, a vigorous and carefully crafted prescribed fire program is a critical management tool.

○